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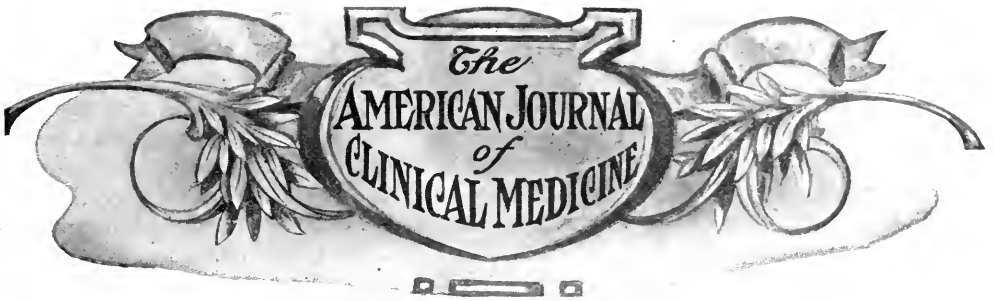
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Yours for a "Square  
Deal" for the doctor  
W. C. Webb



Vol. 15

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No. 1

## "THE MOVING FINGER WRITES"

A few words of holiday cheer and New Year's greeting to the readers and friends of Clinical Medicine, also introducing our "Special Progress Number"

WE have tried to make this number of CLINICAL MEDICINE, our "Progress number," better than any of its predecessors. We think we have succeeded, but we are content to leave the decision to our fellow-members of the great "CLINIC family" to whom we present it with all the good wishes of this season of joy and good cheer. May the "Happy New Year" upon which we are entering be as prosperous to all of us as the one that has just passed. In spite of the clouds that have overspread the financial horizon we believe that the future holds more of promise—for you of the medical profession and for us that cater to you—than has ever come to us in the past. Our united effort can bring all the good things to pass!

We are making history, you and I. The spirit of progress is at last breathing new life into Medicine, and especially into that most neglected, yet most important branch of it, Therapeutics. Nihilism has been the dominant note during the last decade. It was part of that "rationalism" which doubted everything—necessary, perhaps, to aid in casting off of the chrysalis of traditional errors and encumbering theories, but too destructive in its tendencies. The therapeutics of the future must be con-

structive; it must have definite aims; must not be wedded so closely to "pure science" as to lay aside the primal aid of medicine—the healing and relief of the sick. In other words, it must add to the scientific exactitude of modern science the more exalted motive of the altruist.

We are passing through a period of moral upheaval. It is a time of questioning, of ourselves and of others; of search for and passion for the truth; yet most of all for self-examination and self-justification. But instead of the despairing cry of the pessimist, "What's the use?" we are seeking to know "of what use" we can be in the world, and have come to realize that the greatest good comes in the giving of the greatest service. When that spirit has been breathed into our profession, medical science will cease to be a "valley of dry bones," but a warm, vitalized, living force. When we, as members of the profession, are actuated mainly by that spirit, placing the desire to help others above everything else, the medical millennium will be much nearer than it now is!

"The moving finger writes"—not, as the Persian poet would have it, something predestined and unchangeable, but under the impulse of forces of which we are a

part. Therapeutics is unquestionably advancing in response to the demand of the times, that the physician shall work for the salvation of human life rather than for the husks and straws of unproductive scientific achievement. And in this advance movement active-principle therapy is coming into its own. We see signs of this in the tremendous impetus that has been given it during the last few years; through the rapid accretions of strength that are constantly coming to it from the medical profession; and through the bitterness of the fight that is being waged against it by those interested in the maintenance of the "old order."

We have faith in the future. We are optimists, enthusiasts, and we believe that the triumphs of medicine are but just begun. The doubters are not the doers. And we also believe that the best way to dispel doubt is by doing. Therefore, we want to urge every reader of this number of CLINICAL MEDICINE to take hold with us in pushing forward the car of Progress. Do your part. Help us to do ours better. Forward!

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"To love the truth in an age of lies,

"To hold fast art when hunger cries;

"To sing love's song in spite of hate,

"Keeping his heart inviolate,—

"These are the artist's victories.

—Hamlin Garland

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### THE WASTE OF LIVES

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A startling statement was that made by Dr. J. N. McCormack, chairman of the committee of organization of the A. M. A., in an address which he recently delivered at New Haven, Connecticut, that one-third of the 5,700,000 people who were ill or died during the last year might have remained in perfect health through the observance of the simplest rules of health. A startling illustration of the devastation wrought by disease is found in the statement that while 210,000 men fell in battle during the civil war, at the present time we are losing every four years more than 750,000 persons from tuberculosis alone—and this is a preventable disease! If we

should add to this the unnecessary deaths from typhoid fever, smallpox, diphtheria, cholera infantum and other diseases which result from ignorance, filth and carelessness, what an appalling list it would make!

It is time that the doctor came into his own—that his importance as a social factor in the present well-being and future efficiency of our race should receive its proper recognition. We agree with Dr. McCormack that "a great central health organization at Washington, endowed in accordance with the power and wealth of our federal government, is just as much a necessity, if our people are to have the benefits of modern scientific knowledge applied to their needs, as the Supreme Court of the United States."

If the doctor were accorded his proper place in the community, if he could see disease in its incipency, instead of when it is beyond help, if sufficient treatment along scientific lines could be applied early to every individual who needed it, it would have an almost inconceivable effect in reducing the number of deaths, not only from infectious diseases but from all diseases.

We certainly should use the influence of our organizations in bringing these things to pass. Here is a work, and a good work, for the American Medical Association to take up. This does not imply that the physician need sacrifice his efforts to cure disease by remedial agents. That would be just as bad for patient as for doctor. When we begin to study these things we shall find that the use of medicines will be just as necessary in the future as it is now, since skilful, early treatment of the minor ailments will do more than anything else to prevent the major ones.

We need to look at these problems from all points of view. The sanitarian should be a physician—a thoroughly competent one. He should know not only all that is to be known concerning the purification of water supplies, the disposal of sewage, vaccination, disinfection, etc., but also about quinine, strychnine, aconitine, and any other agent which may be used for the



arrest of disease in its very incipency. With this broad view of preventive medicine the importance of the physician will be more widely recognized and his services more largely in demand. Ultimately the doctor must come into his own!

### LET'S BROADEN OUT

"The Philadelphia County Medical Society does, however, recognize the fact that the word 'regular' as applied to physicians and medical colleges has become offensive and obsolete, and that all persons of good character, adequately trained and legally qualified to practise medicine, should be admitted to the society and through it to the Medical Society of the State of Pennsylvania and the American Medical Association; provided only, that such persons shall be content with the honorable title of physician, neither adding thereto nor diminishing therefrom by any epithet or adjective."—*Solomon Solis-Cohen*.

It is hard to see what fault could be found with this expression by anybody whatsoever.

Never put off till tomorrow the laugh that can be laughed today. —*Somerville Journal*.

### DR. GOULD'S ARTICLE

The first question likely to arise in the mind of the reader of Dr. Gould's article, "Vocation or Avocation?" which appears on another page, is, Are these things true? Such a terrific arraignment of the leadership of the medical profession, of the men who are teaching in our great colleges, writing our medical text-books, editing our official medical journals and controlling the destinies of our medical societies, has never before appeared in print—at least from the pen of a member of the medical profession.

CLINICAL MEDICINE neither endorses nor condemns Dr. Gould's article. Its own work is distinctively therapeutic. But it believes in free speech, and its columns are open to every man with a message to the profession which is of sufficient importance

to deserve attention. No one can question the importance of what Dr. Gould has to say, for if a tenth alone of his statements are true then there rests against a supposedly most respectable portion of the profession an indictment of self-seeking, charlatanism and graft beside which the alleged wrongdoings of pharmaceutical manufacturers and the independent press are petty and inconsequential.

Dr. Gould's paper deserves and should have an answer. The columns of CLINICAL MEDICINE are open to any man of any of the classes attacked for a proper reply. Who will volunteer?

### GOOD AND BAD PREPARATIONS OF NITROGLYCERIN

At the July meeting of the Medical Society of Greater New York the venerable Dr. Jacoby made some important statements in regard to nitroglycerin. He believed that the reliance placed upon this agent was often misplaced. In the experiments carried on under the supervision of the New York State Board, nitroglycerin tablets were purchased in many quarters, from the wholesale druggists. It was found that although supposed to contain the one-hundredth of a grain of nitroglycerin, they seldom contained that quantity. Occasionally one-four-hundredth, one-five-hundredth, or even one-sixteen-hundredth, and as little as one-twenty-five-hundredth of a grain were present instead of the one-hundredth as claimed. A great many different reports have been made public of experiences with this drug in practice. Dr. Jacoby said that if one used nitroglycerin, particularly in tablet form, he was sometimes in danger of getting a worthless preparation.

This is a more serious matter than the simple failure of putting into the tablet the required quantity of the drug. Glonoin, or nitroglycerin, is not very expensive, and it seems as if the only reason for the deficiency must be carelessness; and if such a drug as glonoin is carelessly handled, what must we think of the manufacturer?

Probably this explains those remarkable cases that have been recorded, in which physicians say that they gave a whole grain of nitroglycerin at a single dose, with impunity.

We have used many hundreds of the granules containing one-two-hundred-and-fiftieth of a grain each, and are decidedly of the opinion that this is as big a dose as we care to give a patient at one time, at least as a beginning dose. After the patient's susceptibility has been ascertained, the dose of course should be increased to whatever may be needed. For ourselves the two-hundred-and-fiftieth of a grain of a standard granule invariably produces more of an effect than is altogether pleasant.

No perceptible change is evident in these granules after they have been manufactured for many years. There seems to be absolutely no deterioration of the drug. Glonoin is entirely too potent an agent to be handled carelessly, either by the manufacturing pharmacist or by the clinician. Its effects are absolute, unmistakable, perfectly characteristic and unvarying when the dose is exact. The caution given by the venerable Nestor of New York medicine is one which should not be neglected.

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It is far easier to recognize error than to discover truth. The former lies upon the surface, and may be overcome; the latter reposes in the depths, and it is not given to every one to search for it.

—Goethe

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#### OUR CURRENCY: THE PROBLEM OF THE HOUR

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It is within the recollection of the present writer that many years ago Wall street suddenly awoke to the consciousness of a scarcity of currency. For a couple of days there was confusion; banks hurriedly dispatching messengers from one to the other to find out what had become of the currency. Finally it was discovered that Henry H. Smith had drawn five million dollars from the banks, in cash, and locked it up in his safe. This simple action was enough to disarrange the business of the whole community.

This serves to illustrate the point, that business in the United States is done with very little actual money. It has recently been said that there is only two and one-half percent of actual money exchanged in business transactions in the United States, ninety-seven and one-half percent being done on checks, drafts and other commercial paper. The same point may be illustrated by the remark of a leading financier in Chicago, that "all the money in the world would not suffice to pay out the depositors of all of the banks in the United States, should all call for their money at once."

Apparently this is exactly what a good many of them have been doing recently, and throughout the entire country there has been a steady drain of deposits from the banks. This has compelled the banks of the great cities practically to suspend payment, nearly all of them refusing to pay out currency and meeting calls by checks upon each other. A few of the smaller banks, unluckily not being embraced in the Clearing House Association, were refused this privilege, and their suspension is a more serious matter. One instance comes to our personal knowledge. This bank had not lost a dollar or made a single bad loan. Not one dollar of its resources was embarked in a questionable or perilous undertaking, but every security was dollar for dollar worth its full face value; nevertheless, the money calls came upon it and it was unable to transform its assets into ready money, and was forced to close its doors temporarily. Its loans had been made upon real estate, and upon settled business enterprises, from which the funds could not be withdrawn on a day's notice.

A bank may be organized with one hundred thousand dollars capital. If this money were loaned at six percent, it would bring in six thousand dollars per annum, which would be very far from meeting the expenses of the institution; but depositors place in the hands of the bank nine hundred thousand dollars more, making a million in all. Of this eight hundred thousand

dollars may be loaned out, bringing in an income of forty-eight thousand dollars. This amply suffices to pay the expenses of the bank, a small interest to time depositors, and a reasonable dividend to the stockholders, besides leaving something for the surplus fund every year. This is banking.

But suppose the people who had deposited this nine hundred thousand dollars demanded it at once; it is obviously impossible to meet such a demand without liquidating, that is, realizing upon the loans; and this takes time—in fact, it takes more time in proportion to the solidity of the investment. No investment is so substantial as real estate, and none takes so long to turn into cash.

Loans made upon stocks and bonds are more easily liquidated, for the reason that these may be taken to the exchange and sold at an hour's notice; but the chances are infinitely greater. There is scarcely a stock held on the New York Exchange today that is worth one-half what it was a year ago. Take Great Northern, which sold at three hundred and thirty-three dollars a share; now it sells for less than one-third of that, and banks which had loaned upon that stock have had to scuttle to get out of the hole, as the price sinks to something near the amount they had loaned. Bonds are something better, but not much. We noticed last week that a lot of railway bonds selling on the market in the neighborhood of ninety, had been placed for a loan of fifty dollars per share; the price of the bonds slowly sank until it reached fifty dollars, and they had to be sold to protect the banker. Yet bonds are considered much safer as to security than stocks.

These facts furnish the singular paradox, that an institution may be forced into suspension by the solidity of its investments.

A prominent financier remarked to the writer the other day that the safety deposit companies were the ruin of the country; and this is to a certain extent true. Money which is placed in a safety deposit vault is dead money; in fact, money ceases to be alive so long as it remains money. In

order to become productive, to increase and multiply as property ought, it should be changed from money into some form of property. Real estate produces rent, farm lands produce crops, mines produce metals, and business enterprises produce money, by the purchase and sale of products. In one or other of these methods, money must be invested in order to make it increase. Sometimes people fail to realize the difference between safety deposits and banks, and angrily exclaim against banks which are not ready to furnish their money on demand.

The recent movement, the writer believes, was an outcome of the disquiet scattered by Thomas Lawson, the result of which has been a gradual sentiment of distrust in regard to the actual value of stocks, and the security of the banks. This progressed so far that people began uneasily to draw down their deposits and lock up their money in their homes; with great advantage for the burglar, whose work was thereby greatly facilitated. In a great country like ours it does not require much of a movement like this to make itself felt in financial circles. If one percent of the deposits of the country were withdrawn each month, within one year there would be a financial stringency. If this continued through a second year we would be on the imminent verge of a panic.

If this money were simply withdrawn from one bank and put into another, there would be no difference whatsoever; it is the withdrawing and putting in safety deposits, or hoarding it in people's homes, that makes the trouble.

When such a movement as this begins there is only one way to meet it, and that is by increasing the bulk of the currency. If people want to hoard money we will have to supply more money, and the difficulty in our days is to do this. Half a century ago it was perfectly easy. Banks were started, which were allowed to issue notes without limit, and unfortunately without responsibility. In those days a man received a bundle of state bank notes, and commenced counting them up. The bank

that was nearest him was probably worth one hundred cents on the dollar; if it were fifty miles away he took off five percent; and so went on, and by the time he reached Michigan his notes were practically not worth anything—so much so, that our older readers may recollect the time when a customer would enter a store and anxiously inquire if they received “Michigan money” in exchange for goods.

This state of affairs led to the national bank system, which compelled the deposit of at least one dollar in United States bonds for every dollar of circulation that was put out. This gave United States Government security and equality to our circulation, but it deprived the circulation of elasticity, which is the great defect of our banking system today. Now, when there is a universal demand for currency, it cannot be supplied.

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In nineteenth century nations and twentieth century empires the determination of every man to be rich at all costs, and of every woman to be married at all costs, must, without a highly scientific social organization, produce a ruinous development of poverty, celibacy, prostitution, infant mortality, adult degeneracy, and everything that wise men most dread.—Bernard Shaw.

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#### OUR POST-GRADUATE CORRESPONDENCE COURSE

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In this number of *CLINICAL MEDICINE* we inaugurate our new postgraduate course, which, as previously announced, will be under the personal direction of Dr. George F. Butler. This undertaking is a decided innovation, and since we are not tied down by precedent and tradition or fettered by a superstitious reverence for “authority,” it can safely be predicted that nothing likely to be attempted in this direction will, nor possibly can, prove of such high value to the everyday practical physician. This course, hence, will stand as the best. And why best? Because we shall place above everything else the practical, and to the practising physician the best is what helps most. If our course does not give the maximum of help it will fall short of the end for which it is intended.

The time is certainly ripe for this school. In this belief we are borne out by *American Medicine*, which, editorially, says:

“Postgraduate correspondence medical schools have been suggested before but contemptuously ignored by the medical profession, though the idea is well worth considering in view of the difficulty, if not impossibility, of many a practician sparing the time necessary to visit a distant city for the usual short postgraduate course. It has been left to a nonprofessional correspondence school to take up the matter and offer instruction to physicians in a certain specialty. It is a most anomalous state of affairs and should be promptly remedied.

“There is no doubt whatever that in many special studies the regular medical schools and medical associations, with their wealth of current literature, standard libraries and available experts, could supply this great and crying need of the country doctor. He could thus be so well grounded in the essentials that if he does find it possible to supplement it with some clinical instruction later, he will be able to profit by it to a much greater degree than at present.

“The idea is in line with the trend of thought in regard to making medical education cheaper and more available to that lay class, which cannot possibly take the tremendous modern courses suitable only for the rich who can spare the time. Regular universities offer correspondence courses and give degrees or certificates, and it does seem practicable for their medical departments also—at least to a limited extent in the postgraduate specialties. The correspondence department of certain medical journals is quite large. The questions show the great need of the instruction requested by the writers of the letters, and the answers show the need of instructors.”

We are hopeful that the number of the readers of *CLINICAL MEDICINE* who will take up this course of study will be very large from the very start. Go through the first lesson, published elsewhere in this number, very carefully, send in your answers to the questions, and with them any suggestions for the possible betterment of the course. The

first lesson is necessarily introductory. The course will grow in interest as it advances. Do not neglect this lesson. It is important.

### A DRUGGIST OF THE RIGHT KIND

A druggist, writing to *N. A. R. D. Notes*, mentioned among other reasons for not accepting a proposition from a patent-medicine house the fact that their advertising had too much "the-doctor-failed-to-help-me" stuff in it to be compatible with the druggist's idea of friendly cooperation with the physicians.

We are sorry that *N. A. R. D. Notes* did not tell us who the druggist was, that we might notify the physicians in his vicinity and give them the opportunity to show how they appreciate his action. Courtesies of that sort we ought to meet a little more than half way. Give such men as this a "boost" wherever and whenever you can.

### THE RED CROSS

Some resolutions recently adopted by the executive committee of the American National Red Cross deserve our attention. We have all been annoyed by the careless and indiscriminate use of the insignia of this society—the "red", or Geneva, cross—by all kinds of institutions, regular and irregular, erratic and fraudulent, commercial and scientific, military, naval, etc., so that the distinctive purpose of this insignia has become almost entirely lost. The resolutions suggest that "all individuals or business firms and corporations who employ the Geneva Red Cross for business purposes kindly desist from such use, gradually withdrawing its employment and substituting some other distinguishing mark." They also suggest that "all hospitals, health departments and like institutions kindly desist from the use of the Red Cross, substituting for this insignia a green St. Andrew's cross on a white ground, to be named the 'Hospital Cross'."

These resolutions are excellent and ought to be adopted. We are glad to have this opportunity to urge this upon the readers

of CLINICAL MEDICINE, especially such as are engaged in hospital work.

The human race is divided into two classes: those who go ahead and do something, and those who sit and ask, "Why wasn't it done the other way?"

—Holmes

### THE AMERICAN MEDICAL ASSOCIATION

There are some men (few, we are glad to say) who seem to be laboring under the mistaken apprehension that we are unfriendly to the American Medical Association. We want to disabuse the minds of everyone of this suspicion, *right now, once and for all time*. More than once we have risen in defense of the Association; we have printed page after page in its support; again and again we have urged upon our readers the wisdom, the importance to themselves and the good of the profession as a whole, of joining the local, state and national organizations. Nothing could be stronger than the position we have taken on this question. There has been no equivocation, no change, no turning aside. That has been and still is where we stand. And to "clinch" things, to make our position still stronger, we again urge every one of our readers to *join the Association*.

But—and here possibly arises the charge of "irregularity", so assiduously, ingeniously and ingenuously made against us—while we shall do everything in our power to further the best interests of the Association, we can not and will not be bound to indorse all the opinions of its servants. This is no case of "love me, love my dog." The officers of the Association and its various "Councils" are not the Association itself. The insinuation that criticism of these individuals implies antagonism to the Association itself is unworthy of attention, for how can errors be corrected and wrongs righted when the voice of criticism is stifled?

Those who love the Association are not wise in endeavoring to muzzle those who find flaws in its management. We believe that most physicians are like ourselves: they want to have the truth—not a part of it, but all of it; they want no aristocracy

of accepted opinions, but a democracy of thought—every tub standing on its own bottom; and they believe in the “square deal”—with no favorites.

That is what we want to see in the Association. Moreover, we want it to grow bigger and stronger and better; and we want it to do more and ever more for the doctors of America. It should be not only big but broad—too broad to be the organ of personal animosities or the medium of the petty despot.

Have we made our position clear? We hope so. But it may clarify the atmosphere still more to know that the editors of CLINICAL MEDICINE are not candidates for medico-political office; also, that we are not especially “agin’” anyone personally; further, that we are anxious to contribute our mite (and it may not be so small either) toward making the Association a great force for good; still further, that we shall continue to think exactly what we think—fighting only when we must, in defense of what we believe to be right.

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He who cannot reason is a fool; he who will not, a bigot; he who dare not, a slave. —Drummond.

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### A STRONG ADDRESS

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The address made by Dr. T. D. Crothers at the Mississippi Valley Medical Association, on “The Relations of the Doctor to the Alcoholic Problem,” has been reprinted from *The Medical Fortnightly*, and we presume copies can be obtained by application to the author, at Hartford, Conn. This paper was deemed so important by those who heard it at Columbus that it was strongly urged that the paper be sent to every lay publication in the State of Ohio, in order that it should get before as many of the laity as possible. We would suggest that every physician who is interested in this subject (and what physician is not interested in it?) send to Dr. Crothers for copies of the paper and circulate it as widely as possible. If each of us should ask our local journal to republish the paper great benefit would result. The topic is handled in a

quiet, sensible manner, free from anything like intolerance; and while worded in scientific parlance, it is yet fully within the reach of the intelligence of the average citizen. The statistical facts embraced in this paper are startling.

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### THE “SQUARE DEAL” FOR THE OLD DOCTOR

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In his presidential address at the thirtieth annual meeting of the Nebraska State Medical Society Dr. F. A. Long made some sensible comments on the difficulty experienced by old practitioners in trying to change from one state to another. We trust that Dr. Long will not stop here, but will bring the matter squarely before the Council on Education and the Association of Medical Examining Boards. If these gentlemen see that the profession demands a change in this matter, it can be easily secured. For, after all, they are not foreigners, but belong to the profession, and must heed the voice of the profession. A crying injustice was done to many respectable gentlemen when the state boards, instituted for the protection of the people against incompetent practitioners, have been made to work an absolute cruelty against these worthy members of our own profession.

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### ACUTE ANTERIOR POLIOMYELITIS

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The fact that an epidemic of infantile paralysis has recently prevailed in New York City, and that cases are being reported from various parts of the country, leads us to say a few words on this singular affection. It now seems quite probable that this is a disease due to a microorganism, its history following closely that of other diseases in which this causation has been firmly established. As yet no specific microorganism has been discovered, but we may confidently expect this in the future.

This being the case, what should be our treatment of this malady? Evidently we must apply here the principles which have been established in the treatment of other

infectious fevers. In the first place, the alimentary canal must be completely and fully unloaded and disinfected. Let us say that in addition to the usual means employed for this purpose, that is, calomel and podophyllin followed by a saline laxative, it seems probable that the derivation established by the use of injections of cold saturated table-salt solution ought to be exceedingly valuable. This being done, or even while it is being done, we should proceed to saturate the system as quickly as possible with calcium sulphide in order to combat the microbic infection. We should also at the same time saturate the patient with nuclein to reinforce the leucocytes in their fight against the intruders.

This would comprise apparently the leading treatment of the disease, beyond which we should treat the symptoms. Fever, inflammation, high pulse call for aconitine and veratrine; while the heart should be supported, and this indicates the use of strychnine and digitalin, arsenic being added to promote quicker destruction of morbid deposits and relieve the infected area along the spinal cord sooner.

It may be asked why strychnine should be indicated in an inflammatory condition of the spinal cord, when this agent stimulates the cord? So much depends upon the dose. It is not our purpose to suggest that strychnine should be given in doses which would cause tetanic convulsions. In fact, if the irritation is acute, strychnine should not be given at all. Nevertheless, if the affected nerves are being overwhelmed by the virulence of the attack upon them, the cautious administration of very minute doses of strychnine, stimulating these nerves, would aid in enabling them to repel the attack and retain their vitality when it is so rudely assaulted. The dosage here is everything. It is up to the physician to secure exactly such a dose as will really benefit his patient and not overdo the matter.

Keep the eliminant doors wide open. Keep the bowels free from fecal matter, whose decomposition would add to the danger of the patient, and by inducing

fecal toxemia help still further to depress the suffering tissues. Sustain the patient. Keep down undue fever.

Would counterirritation be of any avail whatever? The anatomist asks: "How can it possibly do so? If you abstract blood from along the course of the spine, this blood comes from the skin. Is it possible that it can influence the spinal cord, floating in the liquid which surrounds it?"

Most assuredly it is possible. Blood being drawn toward the skin, by abstraction or by blistering, the fluids will flow in from the underlying vessels to replace it, depleting the tissues down to the spinal canal. These depleted tissues would absorb liquid from the spinal fluid, leaving it more concentrated; and it would in turn absorb liquid from the spinal cord itself. Exactly the same thing takes place when a pneumonia is treated by local applications.

Here we see that the physiologists rank themselves against the anatomists. The latter, dealing only with dead tissues, say that it is absurd that the effect of a remedy can spring across a cavity and reach an internal organ. The physiologists say it is perfectly easy to do this.

As to the effectiveness of counterirritation, or the local abstraction of blood from over the spine, that is another matter. That is something on which the clinician should have his say, neither the anatomist nor the physiologist being competent to judge.

One other point—would it be possible to break up an attack of this infection at the beginning, by a full dose of pilocarpine, sufficient to cause profuse sweating and at the same time enormously increase the number of leucocytes in the blood? This also is a question for the clinician.

Altogether, this affection looks to us like one in which the principles of treatment which we advocate in other infections ought to be tried, and in which they ought to be effective. If they are not effective, then we should revise our ideas on this subject and see whether we have been unduly

hopeful as to the action of these remedies in other infective maladies.

Taking the acknowledged powerlessness of the old system of medication in this malady, it is certainly up to us to give a fair trial to any new method which promises even the possibility of success. Ask any of the adherents of the old methods of medication whether drugs are of use in treating infantile paralysis, and they will unhesitatingly say to you, No. Then why bother with them? Ask any of the users of active principles the same question, and he will unhesitatingly reply, "I have never used them, having had no opportunity to do so." The evidence in the one case is positive, in the other it is negative. It is evidently up to us to try the new methods and see how they apply in the case of this disease.

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Even the clearest and most perfect circumstantial evidence is likely to be at fault after all, and therefore ought to be received with great caution. Take the case of any pencil sharpened by any woman; if you have witnesses, you will find she did it with a knife; but if you take simply the aspect of the pencil, you will say she did it with her teeth.

—Mark Twain

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### CARDIAC TONICS

Haynes, in the last number of *Folia Therapeutica*, contributes some valuable considerations on the use of cardiac tonics. He says that at present the physician has no guarantee that the tinctures or other preparations of digitalis, strophanthus, or squill, which he prescribes, will have the action on the heart he desires. The manufacturing chemist may select what he considers first-class specimens of the leaves, and yet prepare from them tinctures which have very little action on the heart. It is not yet possible to determine the amount of active substances in the cardiac tonics by chemical methods, although this can be done easily enough by physiologic methods. Singularly enough he does not ask why not, as the accompanying dirt is of no value to us, cast it away and use these active substances by themselves, since they are what we want? Surely nobody would for a

moment say that we want the inactive substances.

He says that there is no doubt that galenic preparations vary much in activity. A certain quantity of digitalis is lethal to a certain quantity of mammalian heart-muscle. The glucoside content of the cardiac tonic is a variable quantity, which can not be determined "chemically." Moreover, when the glucosides are separated, they vary so much in activity as to demand standardization as much as the galenics. As example he says that one of the most active samples of digitalis he had examined was prepared from the first year's leaves, and a tincture of strophanthus from specially selected leaves, had only half the activity an average good sample should possess.

This is an extremely unsatisfactory state of affairs from the practitioner's and the patient's point of view. Digitalis is our sheet-anchor in the treatment of heart disease, but it must be within the experience of every medical man to have administered the drug in what he regarded an eminently suitable case, yet without benefit to the patient. In some such cases he will perhaps substitute the infusion for the tincture, and possibly by chancing on a more active preparation he may obtain the effect he desires. In other words, by using the infusion he obtains the digitalein, or "digitalin Germanic," which he could have obtained in its purity with much less difficulty.

Dr. Haynes praises physiological standardization. He says that still more recently we have been able to purchase the active glucosides, as examples of which he quotes Merck's digitoxin and Boehringer's strophanthin; and says: "So far as I have observed, both these substances exert a constant type of action. The strophanthin is extraordinarily active; as soon as the drug reaches the heart, the ventricular contractions become much more forcible and complete, and the work done by the heart is about double." He goes on to say: "It is perhaps hardly necessary to point out the enormous advantages to be derived from the possession of a drug of this type



which can be relied upon in an emergency. Strophanthin when injected intravenously produces an almost immediate effect on the heart. It appears to be taken up and held by the cardiac muscle, for the effect on the heart is prolonged; that is, the drug is not excreted immediately.

All cardiac tonics exert some action on the peripheral blood-vessels. They may cause a most intense constriction, as in the case of apocynum, or squill, or a very small effect, as in that of strophanthus. This difference is of some importance when treating heart disease with arterial degeneration and high blood-pressure. Here it has been suggested that vasodilators, particularly the nitrites, should be administered with the cardiac tonics. Unfortunately such a combination does not produce the desired effects. First the nitrite effect overshadows that of the cardiac drug, and vasodilation is a prominent feature; then the cardiac drug obtains sway and dilation disappears. Nevertheless, beneficial effects follow the use of erythrol tetranitrate combined with digitalis or strophanthus."

However, Dr. Haynes further says that other vasodilators are now known which are almost as efficient as the nitrites, but without their objectionable properties. Referring to caffeine, theobromine and theophylline, all these increase the rate of the heart-beats by direct action on the heart-muscle, dilate the peripheral blood-vessels and augment the flow of urine. Caffeine is of course a cerebral stimulant, exciting first the vasomotor centers and causing constriction of the peripheral arterioles, the central effect for a time overshadowing the peripheral. Theobromine has little or none of this central action, and so produces immediate dilation of the vessels, and is therefore a suitable substance for combination with cardiac tonics in such conditions. It may be administered conveniently as diuretin, a combination of theobromine with sodium salicylate, which is readily soluble. It affects the heart like caffeine, increasing the rate and to some extent the force of the beat. One noticeable effect is marked dilation of the coronary vessels.

By the combined action of a cardiac tonic with a vasodilator, like diuretin, the heart-beat is slowed and strengthened, and the flow of blood through the vessels increased, including the coronary arteries. To some extent the action of the tonic on the vagus ends would be neutralized by the action of diuretin on the excitomotor area; but the vagus effect always overshadows the tendency to acceleration, and the heart consequently beats more slowly.

Theobromine differs from some other vasodilators in exerting a stimulant action on the heart; it dilates all peripheral vessels, but owing to the augmented action on the heart the blood-pressure does not fall below normal but tends to remain even a little above it. Diuresis is an early effect, secondary to the increased flow of blood through the kidney. This combination has produced excellent effects in cardiac dropsy, failing heart, and, above all, in general degeneration of the cardiovascular system following persistent rise in blood-pressure.

Cumulation: Digitalis and squill are slowly absorbed from the stomach but still more slowly excreted; probably actually enter into some loose combination with the cardiac muscle. They take so long to produce their effect that in case of emergency it is useless to give them by the mouth. Strophanthus is more rapidly absorbed than the others.

It is interesting to note, in communications like this, how the profession is gradually approximating to our view. Many millions of granules of Germanic digitalin have now been placed in the hands of the profession. We have given thousands of doses of this preparation ourselves, and have corrected our own observations by reports from many others. We therefore feel fully justified in adhering to our position that Germanic digitalin fully supplies every valuable application of digitalis; that this digitalin, being quickly soluble in water, gives its effects very quickly; that it does not accumulate; that it is far more rapidly absorbed than any other preparation of digitalis; in fact, that it

gives all of the advantages of digitalis without any of its disadvantages or perils. And we cannot resist the conviction that those who do not appreciate the value of this preparation are exclusively those who have not given it due consideration.

It is interesting also to note how the profession is coming around to our original position that the combination of glonoin with heart tonics is irrational. The suggestion to combine digitalis with theobromine is a good one. Nevertheless, the combination with aconitine or veratrine has afforded such inestimable advantages that we would be very slow indeed to leave it. This also has been approved by the use by the medical profession of millions of doses, and we must adhere to our belief that such testimony in its favor far outweighs that of any single observer, even though he be the distinguished pharmacologist of the University of Cambridge.

The reader of these excellent papers will note how these studies lead directly up to the use of the active principles and stop there. It reminds us of Niemeyer's magnificent work on tuberculosis, in which he led up to the tubercle bacillus, not yet discovered, so accurately that not one word of his description had to be changed when the bacillus was announced.

#### CONDURANGIN FOR GASTRIC PAIN

Here is a therapeutic suggestion for those who need it. Condurangin has been shown to be remarkably efficient in subduing gastric pains. Dismiss for a moment the question of whether it is curative in gastric cancer, and whenever you have a case in which there is pain, hyperesthesia, in the stomach, which needs to be quelled; after ridding this organ of any local cause which may keep it up, such as the presence of an excess of hydrochloric acid, try the effect of a milligram of condurangin dissolved in a tablespoonful of hot water, taken one hour before each meal and on going to bed. The writer has had but few cases in which to try this suggestion, but in each of these he has found within

forty-eight hours that there was a distinct benefit accruing, the oversensitiveness subsiding and the patient finding himself distinctly and decidedly relieved. We give the suggestion for what it may be worth.

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"Clearing-house certificates and tight financial conditions," says a Chicago paper, "have afforded more people who never had a dollar an excuse for their hard luck than anything that has happened since the civil war."

#### THE PARCELS POST

It is a strange but interesting fact that a person can mail a package from Chicago to Buenos Ayres or from San Francisco to Budapest cheaper than he can send the same package by mail to Peoria or Los Angeles. Furthermore a foreign-bound package weighing as much as eleven pounds is admissible to the mails, while one intended for domestic delivery must not exceed four pounds. A package weighing four pounds can be sent to any European point for forty-eight cents, while the same package sent anywhere within the borders of our own country will require sixty-four cents in postage, the rate to foreign countries being twelve cents a pound, while that to our own people is sixteen cents a pound.

These facts were brought out by the new postmaster-general, Mr. Meyer, in an address recently delivered before the New England Postmasters Association, in Boston. The American people have long been endeavoring in a half-hearted, unorganized way to secure a parcels post, but thus far have failed. There is no good reason why we should not have it. It is something which the governments of every other civilized country provide for the convenience and comfort of their people, while the United States lags in the rear of even the petty principalities of middle Europe and the kaleidoscopic republics of Spanish America.

Someone has stated that there are four reasons for our failure to have the parcels post, these being the four big express companies, which have thus far succeeded in prevent-

ing legislation they esteem hostile to themselves. Another opposing force has been the country merchant, who has seen in the extension of privileges of this kind the further growth of the great mail-order houses, which now reach out their tentacles into every hamlet and along every rural free-delivery route in America. These houses have worked havoc with the country merchants, or at least so the country merchants think, and the latter naturally oppose bitterly any concessions from the national government which would further build up these powerful and rapidly growing commercial forces. And yet the mail-order houses have been a great thing for the countryman, forcing the local merchant to sell at reasonable prices while bringing the buying facilities of the great cities to the farmer's door.

Mr. Meyer thinks he has found a means by which he can provide the people of the country with the cheaper parcels post and at the same time satisfy the country merchants. The proposition in brief is to lower the rate on parcels from sixteen to twelve cents a pound and increase the maximum weight of mailable packages from four ounces to eleven pounds. A still further concession would be made for the delivery of packages along rural free-delivery routes, the charge for this service to be five cents a pound for the first pound and two cents for each additional pound up to eleven pounds, or twenty-five cents for a package having the maximum weight.

Thus far the opposition to this proposed law, which Mr. Meyer will submit to Congress at its next session, has been comparatively slight—coming mainly from those interested directly or indirectly in the maintenance of the express companies' service. It promises well, and for the doctor it should be a good thing. Many physicians who live in remote country districts along rural free-delivery routes, where it is difficult to get supplies on short notice, will be greatly benefited by such a provision.

We therefore bespeak for them not only a hearty interest in Mr. Meyer's proposed bill, but every effort to bring it to pass.

By all means urge your congressman to work for this measure. Encourage him with your voice, if you know him personally, by your pen if you can do it in no other way. Let us have the parcels post!

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Nothing really upsets the calm, self-satisfied serenity of the pessimist, when he is fixed in his belief that the country is going to the demnition bow-wows, so much as to encounter a real optimist who is everywhere everlastingly soaking up faith and hope and more optimism.

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### GETTING READY FOR STATE LEGISLATIVE WORK

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Our very zealous little friend, *N. A. R. D. Notes*, comes out with its usual weekly "swear head." This time it is—

"GET READY FOR STATE LEGISLATIVE WORK"

*Notes* favors some legislation which we can all heartily approve, such, for instance, as the passage and enforcement of laws which will insure the purity of the drugs to the people. That is a platform that every honest man may stand upon, and it ought to be opposed by few. It also comes out for "well-considered and effective antinarcotic and poison laws." This, too, is good, and we endorse it with all our heart.

Moreover, *Notes* favors legislation which will "weed out of the ranks those who would degrade the business by immoral and unprofessional practices," and this again should have the hearty approval not only of every physician but of every honest druggist in the country. No physician can, and we think no physician will, oppose such legislative measures as these, whose purpose is the betterment of our two professions.

This is entirely different from the legislative program which has been urged upon us by many of our druggist friends and which, we regret to say, *Notes* has from time to time endorsed, either openly or by the silence of consent. We refer to the proposal to prohibit the dispensing by physicians, except in so-called cases of "emergencies." We have repeatedly stated how we stand on this question and we wish

to emphasize again the importance of the physician keeping his eyes open and being wide-awake to his own interests. There is no great danger that our rights will be seriously impaired, if we are wide awake, but if we are careless and willing to let things go by default, then look out! Within a year or two we shall have a pretty crop of special-privilege laws springing up in one legislature after another all over the country. In the words of James Whitcomb Riley, "You'd better watch out."

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What makes all doctrines plain and clear?

About two hundred pounds a year.

And that which was proved true before

Prove false again? Two hundred more.

—Butler

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### BENJAMIN RUSH ON THE LIVER

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Among other good things in the last issue of *The Kentucky Medical Journal* we note a communication in which a physician quotes an original letter by Dr. Benjamin Rush, in his possession. This letter is dated December, 1810, and gives an excellent idea of medical practice at that time, at the hands of the man who certainly stood at the head of the profession of the United States in his day. As professor of Practice in the University of Pennsylvania for thirty years, Dr. Rush exerted an influence over the practice of his day, and since, that has been perhaps only equaled by that of his successor, George B. Wood.

Dr. Rush opens his letter with the remark that a diseased liver generally brings the stomach into sympathy with it. His most powerful remedy for this organ is calomel, one-half to one grain three times a day, guarded by opium to prevent purging. He continues this until the gums are touched, lays it aside until the mouth is well, and resumes, repeating this process two or three times until there is no longer any reason to believe that the liver is obstructed.

Meanwhile, for the distressing symptoms of the gastric malady he recommends remedies palliative and radical. Among the former he enumerates magnesia, sal soda, lime water and milk, with a little laudanum

before meals to enable the patient to retain food. He also speaks of ginger tea and finely powdered charcoal.

His radical remedies are solid foods taken at short intervals and in small quantities with as little drink as the patient can be restricted to. He mentions the curious fact that food of somewhat difficult digestion often relieves a diseased stomach more than food which soon passes out of it, and goes on to recommend that beef, mutton, wild fowls, venison, fish, oysters, salted meat, and salted fish, should be tried in succession, with dry or toasted bread or biscuit, and no other vegetable matter. If all these disagree with the patient, he is not yet at the end of his string, for he then recommends a trial of rennet whey, well-boiled turnips or potatoes, mush of various forms, and above all, rice. The chief drink is to be toast water, with possibly a little porter and water, or claret and water. To assist the diet he recommends five grains of iron rust with an equal dose of ginger to be taken with the calomel. If this be offensive to the stomach he gives five grains of tar made into pills with flour. Again, if the above does not answer, he suggests nitric acid. To keep the bowels gently open is necessary, and for this he recommends the tincture of rhubarb.

He suggests quiet exercise in moderation—nowadays we say "passive exercise." He speaks of the value of blisters applied over the region of the liver, warns against taking cold, and winds up with a little postscript in which he remarks that his usual fee for a letter of advice is ten dollars.

There is a good deal in this letter which cannot be improved upon today, and we very much doubt if, in spite of all the numerous advances we have made in the art of diagnosis, and the multitude of new remedies which have been placed at our disposal, we get any better results than did Benjamin Rush a century ago. We have not yet found anything better for the liver than calomel; and speaking of tincture of rhubarb, the writer will say that following the precepts of Niemeyer, he has given many hundreds of doses of this remedy with most

excellent effect; in fact, only laying it aside when the laity had become educated so far as to demand something less nauseous to the palate. Nevertheless, when the pleasanter remedies of the day prove unavailing, he still has recourse occasionally to this ancient medicament, and nearly always with benefit.

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I owe all my success in life to having been always a quarter of an hour beforehand. —Lord Nelson.

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### AN IMPORTANT WORK ON THERAPEUTICS

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Readers of Dr. Thomas J. Mays's article, which appears in another section of this journal, will be interested in knowing that Dr. Mays is now engaged in the preparation of a work on Therapeutics, which not only departs widely from the beaten path, but which endeavors to place the administration of medicaments upon a far more sound scientific basis than is the case at present. A perusal of his study of "Antipyretics and Antiseptics" will give something of an inkling of the line of thought to be followed out. From a brief resumé of the scope of this work, with which Dr. Mays has favored us, we are able to present below an outline of certain important principles, upon which the Doctor believes the relationship between the action of physical agents and the human organism depends. These principles are as follows:

1. That medicines act like physical forces.
2. That the properties of medicines depend largely on their molecular constitution, on their elective action, and on the quantity which is administered.
3. That medicines in minimum doses have one effect, and in maximum doses they have another effect, not only in degree, but in kind.
4. That medicines have in many cases elective affinities for certain organs and functions.
5. That medicines in minimum doses stimulate and reinforce physiologic forces.
6. That medicines in minimum doses directly antagonize the effects of forces which are inimical to health.
7. That medicines overcome the effects of disease-forces in the same manner as one physical force overcomes another.
8. That medicines in maximum doses depress and restrain bodily forces, whether healthy or diseased.

9. That medicines endowed with the greatest poisonous activity contain a relatively large proportion of nitrogen.

10. That medicines which are endowed with the least, or the lesser activity, with very few exceptions, contain no nitrogen.

11. That medicines which contain nitrogen have a special action on the nervous system.

12. That medicines which do not contain nitrogen have, with very few exceptions, a general action.

13. That inorganic medicines with a heavy molecular weight, or organic medicines, with a relatively large proportion of carbon and hydrogen, and with freedom from nitrogen, act largely in virtue of their heavy molecular weights, and in maximum doses, as a rule, are general depressants or general antipyretics or antiseptics.

14. That organic ternary medicines with a relatively low proportion of carbon, hydrogen and oxygen are general stimulants in minimum doses.

15. That organic nitrogenous medicines with relatively high proportions of carbon and hydrogen, and with comparatively small proportions of nitrogen and oxygen, act on the nervous system, and in maximum doses have a central depressant action, while in minimum doses they have a stimulant action on the nervous system.

16. That, independently of any physiologic knowledge of the action of many remedies, their boiling-point is an indication as to whether they belong to the stimulant or to the depressant class of agents.

In Parts I and II the therapeutic agents are classified into the following physiologic groups: Constructive agents; chemical stimulants; mechanical stimulants; nerve stimulants; respiratory stimulants; circulatory stimulants; digestive stimulants; pancreatic stimulants; lacteal stimulants; uterine stimulants; gastric stimulants; intestinal stimulants; hepatic stimulants; urinary stimulants; counter-stimulants; nasal stimulants; sweat stimulants, general mechanical depressants: antiseptics; cerebral depressants; musculoneurothermal depressants: antipyretics; neuromusculothermal depressants: antipyretics; sensory depressants; motor depressants; circulatory depressants; respiratory depressants.

Part III is devoted to clinical therapeutics, in which the above principles are applied from a chemical standpoint.

We feel sure that readers of CLINICAL MEDICINE will, like ourselves, await with eagerness the appearance of this book. It is based upon no pessimistic view of medicine, rather upon the conception that the faith of the fathers was built upon a reasonable, if not always rational, empiricism. Every earnest effort to build up the art of therapeutics, to render it more scientific and rational and at the same time more practically helpful deserves not only the warmest commendation but active finan-

cial support. Keep your eyes open for this book—and when it comes out, get a copy.

### A STATE JOURNAL "SYNDICATE"

An article in our excellent contemporary, *The Indiana Medical Journal*, calls attention to the passing of the old *Fort Wayne Medical Journal*, which for more than twenty-five years has been the organ of the medical profession of one part of the state. The editor of this journal, Dr. A. E. Bulson, Jr., is to become editor of the new state medical journal which is to be published in Indiana. In discussing this important change, the editor of *The Indiana Medical Journal* says that the new journal will be patterned after the general style of *The Kentucky State Journal* which has done so much for the profession in Kentucky.

This is interesting!

In this connection the following quotation is of decided interest: "Moreover, by banding together, the state journals are enabled to secure the same advertising solicitor for several state journals, and for the national *Journal*, thus save expense, and advance the commercial and financial field of the state journals, and so establish properties, pay the various officers suitable salaries, buy supplies by wholesale, and produce similar products in size, style and quality, but marketing them in the various states where they are printed. In these days of securing commercial efficiency by combination, the establishment of state journals makes a strong appeal, and with the guidance and experience of the national *Journal*, with which they are affiliated, there should be no more doubt of their financial success than there is of a Hearst syndicate of newspapers."

This is another interesting outline of the program, which seems to be to create a trade-unionized profession. Not only will the journals of the profession be syndicated and run into the same mold, built after the same pattern, but we can assume that they are to reflect the same ideas and on occasion print the same stuff, especially if that

stuff has to do with the carrying out of the peculiar plans of, and the personal aggrandizement of, certain men. Are we to assume, also, that it is planned for our unionized profession to go into the buying and marketing of medicines, the publishing of books and, of course as well, the making of surgical instruments and possibly even of automobiles? Certainly this would be organization with a vengeance!

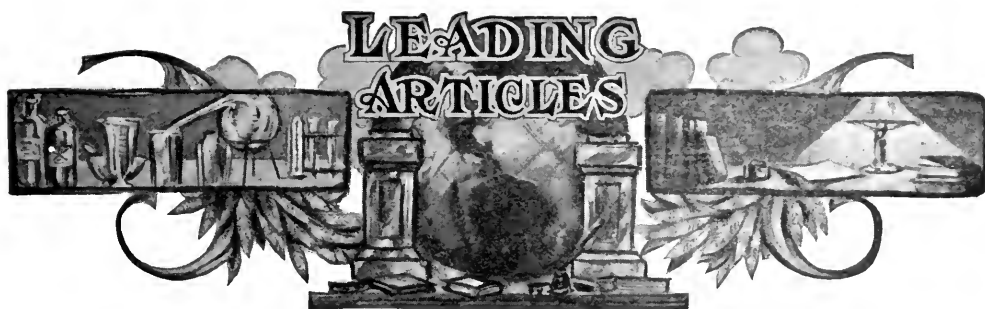
Under the guidance and enterprise of the national *Journal* we are sailing along at a merry clip—straight forward to that socialization of our profession idealized by J. Medill Patterson, J. G. Phelps Stokes (and wife) and W. D. Haywood. If we can also look forward to a uniformity of idea and the universal acceptance of whatever our legislators-to-be may designate as "truth," then, ah then! the millennium will be here.

### FRIENDS AND ENEMIES

Nothing that a man can gain by carrying on an acrimonious war with another man will compensate for the injury to his own being by nursing the spirit of revenge and hatred in his heart. The evil things men say of you only do you harm in the minds of the people whose opinion of you is such that they believe you what your enemy portrays you—that is, men who are already your enemies. The evil done to yourself, by allowing yourself to brood over this thing and nourish revengeful thoughts, is a real evil, debasing your own soul.

Therefore, fight your own fight, do your own duties, play your own part in the game of life, and go ahead manfully, never diverted from the end in sight—if that be a noble one—by the envious attacks or evil croakings of your enemies.

It's hard, sometimes, to philosophize about these things—to take the vile assaults calmly. *We* don't always do it ourselves; but we hope *you* do! And all this doesn't mean for a minute that we should "lie down." God forbid! It means that we rejoice in our thousands of friends—are indifferent as to the few enemies.



## VOGATION OR AVOCATION?

A plea for a higher conception of our profession, nobler ideals, greater desire to serve mankind, less reverence for mere "success," less subserviency to self-seeking leadership

By GEORGE M. GOULD, A. M., M. D., Philadelphia, Pa.  
Editor of *American Medicine*, Author of "Gould's Medical Dictionaries" and of "Biographic Clinics"

FOR professional education and medical progress one small medical college, especially if located in a little, instead of a large, city, is worth any two big medical colleges. As a rule the greater the size of the classes, the more famous the professors, then the more untrue the teaching, the more immoral both teachers and taught. Success, ambition, politics, greed, conservatism, the dirty kind—are more certain to rule the minds and kill the hearts of the men in control of the huge institutions than those of the small ones. This is because the ambitious self-seeker and medical politician chicanes for and gets the professorship.

### *The Rich Should Help the Little Colleges*

The duty of the rich and of the endowers is, therefore, to avoid helping the unwieldy and inethical schools with their (often) ill-gotten wealth; they should help the little colleges. The more the money the less the therapeutics. Everyone who may influence a young man beginning the study of medicine should do his best to keep him out of the big college and to guide him into the small one. The greater the student-body, the worse the teaching. The more pompous

the professor, the quicker he should be laid aside. The greater the boast of "science," the more really unscientific. When professors are paid enormous salaries by lay commercial companies, their science is pretty sure to be unscience. Did you ever hear of a professor in a huge political medical college making any valuable medical discovery? If you have heard of such cases, did you ever personally know of one? And, according to some of the members of the Council on Medical Education of the A. M. A., three-fourths of the 4,000 annual graduates of American medical colleges are too poorly taught to practise medicine intelligently. The chairman of the Council says 58 percent of those who fail to pass the state boards "cram up" and pass the examination a few weeks later. Dr. Ingalls says that out of 150 American medical colleges 144 are not up to standard in their teaching. Possibly he meant the six were the six biggest colleges. If so, I beg leave to differ, absolutely.

### *The Charlatanism of the Strutting Professor*

Of all amusing and yet disgusting things we see every day the most egregious is the fawning upon and adulation of the rich sick and the sick rich by our hysteria doctors and leading consultants. Thousands of

\*An address, delivered before the Medical Department, Syracuse. (N. Y.) University Alumni Association, June 11, 1907.

these pitiful patients are being "rest-cured" out of their money and health with no attempt to learn the causes of their diseases, and with fear that the known causes will become widely known. As a profession we have catered to this gallery-beloved melodrama. Our professors and big-wigs have played the game of strutting before the groundlings and of demanding many-thousand-dollar fees for cures that often never cured, and for operations that frequently were unnecessary. The medical profession should long ago have stopped this quackery of \$5,000 and \$10,000 fees. Every one of us knows it is charlatanism. The science and skill of the surgeon and the great *poseurs* is no greater, is often not so great as the science and skill of the family physician who for weeks or months or years combats or conquers the common diseases of his patient. And yet for infinitely more conscientiousness and care the family physician is paid a few dollars, when the operator is paid hundreds or thousands. If these high-chargers had a spark of professional ethics in their souls they would refuse the absurd fees until their brothers of the guild should be compensated proportionately for their service. If the pseudo-medical financiers will not choose to help their hard-working fellows, then these should tell the public what a fool it is to pay ridiculous sums for some of its jobs.

Because, also, we all know that the few reputation-seekers and money-makers are no better operators, and often not so good, as the quiet men who are winning their spurs. Many of the quiet gentlemen do not want spurs, and honors, and LL. D. degrees, and professorships.

*Never consult with the famous*, should be the motto of the honorable general physician, especially if the famous man is an extortioner, a professor, and lives in a great city. Such men are usually politicians and self-seekers who play the game, not for the poor referer of patients, and not for the poorer "clinical material." The vast majority of practitioners of today are exactly like the lambs which the Wall street lions and tigers, known regularly as bulls

and bears, have such fun and success in devouring. The brokers and the experts are like unto the "great authorities" and "professors." If you have a little hoarding to invest, do you ask the Jay Goulds and the Harrimans what to do with it? Whether in finance or in medicine, the safer rule nowadays is not, *Trust the expert*, but is, rather, *Distrust him!*

### *The Degradation of Specialism*

Especially as to much specialism! Deeper every day in degradation fall the neurologists, ophthalmologists, gynecologists, genitourinaryists. Should not the alienists as a body be examined by a special commission *de lunatico inquirendo*, appointed by sane murderers, to determine their mental condition, and particularly how far financial motives govern psychiatry? Did a fashionable neurologist ever do anything for a patient except to name or misname his disease, and humbug him? Did official orthopedics ever prevent a case of lateral spinal curvature, or cure it while in its functional stage? When organic, it is glad to try to cure it, but it never then succeeds in curing. Would you trust any patient with evident and glaring eyestrain to the "leading ophthalmic surgeon" of any large city in the United States? What right has the gynecologist to set up for himself? General surgery and gynecology, even as defined, have constantly overlapping spheres. What terranean or subterranean reason is there for the existence of the gastrologist? Is there a book on gastric and intestinal diseases which says a word about the chief cause of these diseases? And yet Professor Musser—is there better authority?—asks, "Who has not very often seen these diseases cured by the relief of eyestrain?" And the G.-U. man—well, one may not speak of him in public! And one cannot speak of him in private. Should not the general physician know about the diseases of the skin, at least as much as the dermatologist now knows? For a generation the most successful, the most scientifically and therapeutically successful proctologists are quacks, each making a hundred thousand



dollars a year, and their patients never begrudging them their fees. That is at once very solemn and very funny truth.

Such things arouse the question, Is it wise to have killed the family physician? If you take from him all minor and major

pointing-finger, at the cross-roads? Why not have a printed form to mail or hand to every patient: "For diseases of the digestive organs consult Prof. Blank of your nearest city; for every possible and impossible surgical ailment the great operator



DR. GEORGE M. GOULD

surgery, all gastric, dermatologic, laryngologic, ophthalmic, gynecologic, neurologic, psychic, proctologic, obstetric, venereal, and laboratory diseases what is left the poor devils which the medical colleges are turning out at the rate of four thousand a year? The answer is both amusing and amazing: they are simply of use as referers to the specialists and leaders. Of what advantage a sign-post that walks? Why not cut off the doctor's hand and nail it up with the

So-and-So; if the child squints, can't study, or has anything whatever the matter with it, get its eye-muscles cut by Tenotomo Maniac, or buy a pair of specs at the department-store, or of the Eyes-Examined-Free man; for hysteria there's nobody equal to Blank, the rest-cure man; if you are a paranoiac go to the great witness of the last murder trial. If you have nasal and sinus-troubles, get your forehead bored, your turbinates removed, or your deflected

septum straightened, by Noseyman; if you have headache get some phenacetin at the soda-water fountain." And so on. How is the family physician to live as a mere sign-post? In the first place, the specialists would say, "It is not at all necessary that he lives." Secondly, that riddle has been solved long ago: if the fee is sufficiently large, may it not, asks Chicago, be "divided?"

When the general physician gets in deep water, when in doubt, he should of course ask for a consultation. But as surely and as a rule let him beware, and warn the patients' friends to beware, of the famous far-away professorial consultant. And before any consultant is engaged let it be understood by all concerned that the consultant's fee is to be in some sort of relation to that of the attending physician. If the consultant will not consult, gratis, in a charity case, let him never be called in when the rich patient's life is at stake.

#### *Shall the Professor Pay, or be Paid?*

Indeed, is it not becoming plain that the functions of a professor in a medical college, and especially in a big one, are so onerous that if he does his duty to the students and the hospital he should not have private practice? There is enough work connected with the hospital to keep him up to the mark in clinical and operative progress. He must read and study more than is usually possible for the non-teacher, and his lectures and instruction should be made over afresh each year. When I was a student we all had the same lectures repeated each year, and we knew exactly to a day and minute when that old story, effete joke, or eloquent admonition would invariably appear. Unless the professor is properly paid he cannot, of course, agree to drop private practice, but he may be sufficiently well paid. In how many colleges, even at present, do the professors pay the institution for the privilege of teaching? That's the way, in fact, that much private practice was formerly obtained, and is the sorry custom entirely dead? The unimaginable infamy and devil-

try not infrequently exhibited in the race for a medical professorship are not outdone even by our ward bosses and legislators.

Men do not do such things for the love of pedagogics or science. Within twenty-four hours after securing his professorship for which he had fought and chicaned for years, a medical politician had closed a contract with a layman whereby, because of that professorship, the professor received another salary much greater than that his medical college gave him. Sometimes the bitter personal rivalry of two teachers, for instance of surgery, results in a bifurcation of the professorship. Each professor of course must have a ponderous textbook and teach a different surgical practice and philosophy from that of his hated rival. The poor boys are sure to fail in their examinations if they answer a question as the rival would have it answered. The divided-skirt professorship of course does not last long, for the "worse" man is certain finally to kill off his colleague by some method—usually by the football tactics of hitting when the umpire is not looking.

#### *Surgery Should be Appealed to Only when Therapeutics is Impossible*

When I was studying medicine, and also while an assistant in an out-patient department of the hospital, I found my fellow-students were always interested in operations. They would crowd about the operator, while I was left with the patients who had pain or organs acting badly; functional diseases did not interest them much. When I asked what caused the surgical disease I was stared at as if I were "cracked." When I asked if the surgical disease couldn't be prevented it was evident that I was stark mad. If it was surgical disease with its dramatic blood-and-thunder professor that aroused greatest interest, the little balance of interest remained for inflammatory diseases. These were treated and treated and treated, but if I asked after etiology and prophylaxis, I was again stared at with lifted eyebrows.

I was by no means convinced I was a fool, and I did not lose heart. My conscience kept hammering at my cowardice that

"the way to get rid of disease is to prevent it." Surgery is the despair of curative medicine, and must be appealed to only when therapeutics is absolutely impossible. So when I began practising I had a tough time of it. I did not hunger for operations, and I found the operator was often operating when it was unnecessary, and he had no care whatsoever in preventing other patients from coming down upon the operating table. He did not inquire how functional and inflammatory diseases are caused, and how they degenerate into organic and surgical diseases. I found that as I myself became interested in surgery I grew indifferent to my duty to prevent surgery. I saw my colleagues, many of them surgery-mad, writing articles, buying instruments, "pipe-laying" for surgical offices and professorships, and never once thinking of their duty to prevent patients from becoming hopelessly, surgically, and organically diseased. So I renounced surgery, except minor and constructive operations; with the renunciation, of course, went the piles of money, the secret desire to be famous, to get honors, professorships, and the rest. It was not for me to be one of "the leading ophthalmic surgeons" of my day or city.

#### *Using your Position to Feed your Fame*

Notwithstanding this and without my solicitation I was offered two hospital positions which were avidly sought by others. After accepting one, I found men were using their positions to feed their surgical fame, and that the "clinical material" of hospitals was considered as vivisection material, stuff to practice upon to turn over to the underlings if not wanted by superiors, etc. Indeed, I was advised by my superiors to have the poor dispensary patients come to my office and sit about the halls and waiting rooms to make an effect upon private patients, and the rest. Moreover, I could get some money out of the poor if I worked the affair cunningly. My answer to all that was—my resignation! And later I resigned a higher position as visiting surgeon because I found that there was here no attempt at discrimination

between the needy poor and those who could pay. I became convinced that the average dispensary patient was able to pay a small fee, many of them large ones; that the refraction work, the great vitally important thing, was most bunglingly done in such dispensaries and could not cure the patients of their thousand eyestrain diseases.

The conviction grew that physicians should do this work privately and better than in the public places; that they should have the small fees which the patients could pay; that it was money and health saved for these patients if they sought and got such service privately. The conviction became more fixed that the hospital and dispensary business is overdone, and that the profession has been foolish to encourage the overgrowth, the graft and the craft, by its negligence and participation in the abuses, and by giving its service for nothing. Thousands of physicians are struggling for a living while compelled to do poor and hurried charity work, which in reality is not genuine charity either to the receiver or to the giver. And what is true of this specialty is generally and more or less true of all others. We all know that there is a vast amount of sham, deceit, and wrong in the whole affair. There is a false and hypocritical sentimentalism masking cunning commercialism and medical politics. Clinical material is needed by the medical college for teaching purposes; but today thousands, even millions, are treated to glean out the rare or striking case needed by the professor to attract attention or get him future consultation practice. If he wanted to teach common medicine, not the curiosities and "stunners," the mobs would be differently used and those able to pay would be made to pay. The hospitals and free dispensaries now go into competition with their own graduates just being sent out. It is unjust; it is an outrage, which a higher professionalism will stop.

And it extends to many of the asylums, homes, and institutions for the defectives and delinquents. I visited a blind asylum not long ago, and the first thing I noticed

when I entered the grounds was that these "blind" ones were playing a breezy game of baseball. The batters hit the ball and the fielders caught it as well as many league players. Among the inmates I found albinos, and others who could have been given fair vision by glasses, and others who with a bit of surgery could have earned their living. Salaried men were traveling through the land to secure patients. In this and other institutions it was not the aim to make the inmates self-supporting by teaching them how to go out and make a living by their own efforts. It is not to the pecuniary benefit of the institutions to make the inmates earn their own living, but to prevent them from doing it. A teacher of deaf-mutes tells me that the schools and asylums for the unfortunates do all in their power to keep the inmates in the institutions and dependent upon charity. The truth is that all blind and deaf-and-dumb persons can make their own living independently, if they are not taught to "lie down on the community," and if they are encouraged a little to work for themselves. Blind "tincup men" by illegally parading the streets can make better wages than at honorable work, but that evil has one good at least—that of punishing the poor sillies who give them money.

#### *Common Hospital and College Graft*

We need to examine calmly the abuses of the big hospital of the big medical college of the big city. Private endowers, and the taxpayers of the city and state, are wheedled or forced to give their savings to found and keep up these institutions; and all of us know that the whole affair is largely a fraud, and that they are being corrupted for personal and selfish purposes. Do the professors charge no fees for lodgers in the private rooms? Why should a charitable hospital go into the hotel business and let rooms at \$25.00 or \$50.00 a week?

Every doctor in a large city knows that the staff members of dispensaries and hospitals are using the charity clinics as feeders of the private office, and that good incomes are secured by the trickery. Those

physicians who will not or cannot secure these hospital positions are compelled to establish private hospitals and sham dispensaries in order that they may march in the great parade of Success, formed by their professorial rivals. But, even then the majority of the profession have no share in or help from the big hospitals. So overdone is the big hospital business that large sums of their charity-money are spent in advertising for patients. In at least one state, Pennsylvania, unimaginable abuses and incredible corruption are bred by the shamelessness of the scramble for the undeserved money of the gullied public. Do you know that Quay riveted the manacles and mouth-padlocks of his vile political machine upon Pennsylvania by means of these hospitals and charitable institutions, i. e., by means of the criminal participation of the medical profession? Several hundred of these supposedly benevolent and teaching institutions have several thousand trustees—all in fact, of the most powerful, learned, rich, or influential men of the state.

The state parcels out millions of dollars a year to these institutions, precisely in accordance with the help these thousands of trustees render the Quay and Penrose machine, or exactly, at least, according to their silence as regards machine infamies. One man of these thousands of trustees once dared to raise his voice in opposition; the machine warned all the doctors, who forthwith deserted the brave opponent, and now woe to that man and his institution and the hospital of his choice. At once the successors ask the Harrisburg ring for the millions and they do not even care to defend themselves against the following argument: There are a thousand private colleges and private charities, and a million taxpayers disbelieving in the peculiar methods of education carried on by the state-fed institutions, and deeply believing in their own or other institutions not fed by the State! Why should they be taxed out of their millions for private enterprises they do not like?

So great is the rivalry of the hospitals for this state "graft" that according to the

poorly hidden mathematics of one, by simply dividing the total number of night patients by the total number of cots, it comes out that on the average over two patients slept on every single cot every night of the year! Is there anyone who does not know that the statistics of the annual reports of dispensaries and hospitals are often a mass of lies? Even after the theft of many millions to build our *sine-Quay-non* State Capital, the ringsters will find money to reward their obedient servants.

Against this orgy of unconstitutional rottenness only one legislator—thank God there was one—dared to raise his voice in protest. On May 3 of last year Representative Reynolds said:

“Many of the bills we have passed are ridiculous. It is in the matter of giving away state money for hospitals and other semiprivate institutions that this extravagance reaches its climax. The time ought to be here when a sick woman, a room, a donated blanket and the services of a doctor are no longer the nucleus of a hospital. Yet with only this outfit you can call the establishment a hospital and come asking state aid and get it. I tell you frankly that I am ashamed of some of the bills I have introduced here to get public money, and the only excuse is that others do it. We are sowing the seeds of scandal, and I predict that unless this lavish throwing away of state funds is stopped, and that very soon, there will be added to the history of Pennsylvania a chapter darker than that which marked the corruption when the State was being looted for railroad-building enterprises.”

I know of but one physician who has dared to speak against the infamy as Mr. Reynolds has done.

The modern hospital is frequently in fact not unlike an illegitimate foundling: the endower thinks he has done his entire parental duty in putting a bag of money in the child's basket and, paying no further attention to it, leaving it for the lady patronesses, wet-nurses, artificial foods, incubators, and medical men to bring up. Of course the “charity” hastens to become

very selfish and cunning, and the treatment—oh, the treatment!

The man whom the American profession seems most to honor—probably because he shows his opinion of it by deserting it—does not believe in treatment, at least any that can cure; he never cured or cared to cure a patient of disease; he amused himself and patients suffering with gallstones and with astigmatism and floating kidney, by treating them with wet-packs, learned lectures, and more learned textbooks; denied at first and until impolitic that the stegomyia had anything to do with yellow-fever—and so on! Of what use is the medical profession if there is no cure for any disease? Indeed, for a long time, now, the Medusa-head of therapeutic pessimism has been peeping out from under the wig of anatomic pathology and medical atheism.

For a generation the surgeons have been sneering at everything but surgical disease; the pathologists have long ago settled it that there is really no functional disease, and that it is only our microscopes that are at fault when we cannot discover the bug of senility, the lesion in foolishness, or the tumor in megalomania. The gastrologists practically admit that the surgeons should get their patients after they have thoroughly pumped their stomachs and purses. But at last the neurologists have come into the open and have flung away their wigs. Snakes instead of hair are not pleasant to look upon! “Neurasthenia,” it seems, has “passed,” and with it hysteria—all the thousand forms of habitual peculiarities in many women and children. Such patients, one and all, are simply insane, and that's an end on't! What a world, when all but a few Americans will be in asylums commanded by the only sane men, the neurologs! And nobody curable! One-fourth or one-half of all the asylum inmates will have lateral spinal curvature, but the orthopedic surgeons will smile when you suggest that the etiology is known, and the prevention also. The superintendents of the thousands of epileptics will be “disappointed” if a possible cure or method of prevention is suggested. Forty percent of

all inmates will be enduring the agonies of migraine, but the moribund ophthalmologists will wink at the decadent neurologists, and tap their foreheads significantly as the refractionist passes by.

*"Leaders" do not Lead, but Oppose Medical Progress*

That the "leaders" do not make medical discoveries, that they never lead, but that they oppose medical progress and deny medical discoveries, is illustrated by the history of every step in professional progress; but chiefly by the history of vaccination. The great Royal Society, all of the official leaders of English medicine, opposed and fought Jenner when he labored to secure the establishing of the truth. But it now is clear that Jenner did not discover the immunizing power of cowpox, and that far from making the first scientific demonstration of cowpox inoculations, and of their power against subsequent smallpox inoculations, Jenner waited twenty-two years after the grand old farmer Benjamin Jesty had dared these things before he inoculated the Phipps boy. And the leaders of today laud Jenner as the discoverer of vaccination!

These leaders always make monuments for the men they themselves have first made martyrs. A national committee should be appointed to learn why we as a profession honor the living frauds, hypocrites, and bigots, and never the real discoverers until they are dead, and why we usually honor the great dead for the thing they did *not* do. The case of J. Marion Sims, martyred by the New York City medical leaders, shows that America has only dishonor for her greatest and best medical men. The leaders Hodge, Meigs, and company, succeeded in silencing Holmes as to the contagiousness of puerperal septicemia, but did Hodge, Meigs, and company ever acknowledge their crime? Men who are modest, who are not politicians and unprincipled schemers, can not, as a rule, secure medical fame and wealth for themselves or recognition of great new medical truths for their patients. Great

universities are prostituting themselves by giving all sorts of honorary degrees, for purely selfish purposes, to men without any just claim to them. If you want to be an LL. D., don't do anything for the good of medicine or humanity! Be a cunning fraud!

Let me epitomize the illustrative history of one of my patients who fainted from exhaustion. He was a poor mechanic whom the scientific neurologist ordered to the surgical operator hungry for practice and with empty hospital wards and private rooms. Jumping out of his touring automobile the surgeon trephined big holes in the poor man's head but found nothing to justify the prearranged diagnosis of Jacksonian epilepsy; the neurologist and surgeon rendered dozens of bills, even for the nurses, and for the cot on which the man lay, and they got a thousand dollars from him; then turned him adrift uncured, with the insult, "We have done our part, it is now up to you to get well."

Another patient of mine was told by a neurologist that she had "neurasthenia," and was sent to a sanitarium—and have you ever considered the wondrous growth of these hundreds of sanitariums? But a pair of glasses cured her in a day. The "science" of this neurologist teaches him that there is no such a thing as a reflex in the human body, physiologic or pathologic.

Another patient was charged several hundreds of dollars by an ophthalmic surgeon for a little operation. The poor farmer had ten acres of land, which he sold to pay the surgeon his fee, and then he became a day workman and finally he and his family went to the dogs. A young lawyer without income or bank account was charged by a praying surgeon \$600.00 for an operation, and \$50.00 each for four assistants. The four assistants never saw a cent of the money. This great man has dozens of LL. D. degrees, presidencies and professorships and he advertises in all the newspapers!

Another illustration is this: A world-famed surgeon was to read a wonderful paper on a miraculous operation at the great

medical association held in a distant city. The famous one had given copies of his paper to the daily newspapers of his city with his photograph, etc., to be reproduced the next morning after its reading before thousands of doctors in the far-away city. Something happened so that the reading of the article had to be postponed until the next day. At once the telegraph wires were heated with messages to postpone the newspaper publication for a day. It was too late, and so the newspapers had to say that they had just received a full account from their correspondent of the following marvellous discovery divulged to the scientists of X—the day before, in a paper, of course, not read. The fun was frightful—for the great professor's enemies! One of these, a great LL. D. and rival, got hold of the facts, wrote up a full account of the scandal and published it to the medical world. But, most cunningly, he published it anonymously. To-day these two great rivals entertain each other with profound bows and play into each other's hands just as if they didn't hate each other with adorable bitterness.

The end of the beautiful story is that the proposed miraculous operation was like the LL. D. proposer—a fraud. Not one of you could ever guess what it was. But the patients! Oh, *they never were considered*. A rich patient recently paid, in all, some \$20,000 to have removed, what one of the consultants told me was “as pretty a little healthy pink appendix as he had ever seen!”

Now, the men who do these things are they who make of medicine an avocation. But all good physicians feel it to be a calling, a vocation.

### *The Remedy Lies With You*

You men with a medical vocation, you who loathe these things I have described, outnumber the men who prostitute their profession a hundred to one, and yet by your negligence and even by your sins of commission you authorize and encourage the abuse. It lies with you whether these consultants are consulted or not. And

whether you buy the medical journals and books they control and own and write!

This vogue and false reputation of the false leaders comes largely from your carelessness as to your medical-organization officers and cliques, your paying your money to misleading leaders and self-publishing publishers of journals and books. What possible excuse is there for the torrent of textbooks by professors and rivals on “Practice” and on every imaginable rehash of old or stolen medical knowledge which the egotism of authors and the cupidity of publishers pour forth? It is you who buy these thousands of useless books, most of them at double the price you should pay for them, even if they would do you good, and help you to cure your patients. Do you know how many of them are literally and absolutely stolen? I could point out to you books every line of which is stolen even to words, sentences, and surely as to ideas.

I have suffered atrociously from the thieves and know the facts. Whole articles and books and “systems” exist, not a page of which was written, and often not read, by the men credited with the authorship. One recent pompous article in a big book on an immensely common nervous disease was old medieval stuff recooked by a penny-a-liner, and one sentence only, of hatred for a rival, was inserted by the “author.” In these criminal “textbooks” and “systems” much of the best literature is not only not epitomized, it is not even mentioned. A hundred or a thousand articles and reports not suited to the authors' prejudices are as calmly ignored as if science and morality had no part in medical literature. Another illustration: A purse of \$10,000 was recently made up by the medical admirers of a great medical man, because of his supposed authorship of a great literary work. But this work was not done by the assumed author, who pocketed the \$10,000 of poor doctors, and then left the medical profession for good and all.

And of all the useless books in the world the most madly foolish are the many-volumed composite “systems” which you buy, got up for the benefit, pecuniary and repu-

tational, of the sinecure-hunting, popularity-mad, chief editor, next, by reflection, of that of the me-too departmental editors, but all surely for the sake of the rich lay publisher. A year or two ago the chief editor of the latest and worst of these composite systems told a friend of mine he would not write an article for less than \$10 an octavo page, and that any doctor is a fool who writes for less than that. He now secures a host of "fools" to write for him at the fool-rate, while he takes hundreds of dollars a page, and all the fame you will give him. In these systems you will find little to help you practise medicine. Their knowledge is largely the false knowledge of the past, in which practical therapeutics—your great concern—is ignored, and the old anatomic pathology, long since gone to seed, is reemphasized; while the pathology of the living, crippling, amazingly common functional diseases is utterly misstated and ignored. *Not* curing the millions with these functional diseases is the source of the incomes of these leaders.

In the latest and worst of these systems the international editor-in-chief says that the best protection against quackery would be for every practitioner to have a laboratory in his office. Every quack in the land will grin with delight at that lie—grin from ear to ear! You who try to cure functional diseases and prevent organic ones know how the quacks are beating the leaders.

Did you ever think of the astonishing fact that the dead patient cannot be made alive and healthy? That functional disease precedes and causes all organic disease? That the pseudopod preceded all anatomic pods? That your work is almost entirely with the functional ailments, the headaches, belly-aches, neurasthenias, dyspepsias, constipation, nervous disorders, -algias, and -itises, etc., of a thousand kinds born of physiology and hygiene gone slightly wrong? *Why the interest in the hopeless endproducts, and the textbook indifference to the curable functional disorders, which, neglected, end upon the postmortem table?*

In the books and articles of the great editors and leaders you will find postmortemism

apotheosized, and the conclusion of every page is that the end of all is either hysteria, or the surgical operation, or hopeless invalidism and death. Therapeutic nihilism is written over the gate, and the motto is, *Leave all hope behind ye who enter here.* The chief advocate of therapeutic nihilism is logically of great service to the Eddyites who quote his august authority when sued for allowing their children to die without medical service. A prominent medical journal, itself now happily postmortem, recently said editorially that every obscure gastric symptom demanded immediate gastrotomy of the patient.

#### *For Insomnia or Optimism—Try an Official Journal*

And these official medical journals—what a farce they are! If any of you are troubled with insomnia or optimism you should subscribe for, say, *The British Medical Journal*. Such journals are carried on for the benefit of the select few who arrogate to themselves a knowledge which has been outlived, a science which is almost as hopeless as that of Mother Eddy, and an egotism which outdoes that of this wonderful lady. Try to get into the columns of these defenders of the faith an article which advocates progressive advances in medicine, and see how you will be "turned down."

In our country just now the powers of a desirable organization of the American profession are being used for a most undesirable monopoly, for crushing out democratic spirit and independence, for extinguishing minorities and independent rival journals. Impertinence, bulimia of power, tradesunionism, are being fostered, and an insane howling about little evils is used to silence critics of infinitely greater ones. The worst abuse is being officially poured upon good drug manufacturers by men secretly in the secret-drug business, and who are carrying on far more degrading businesses than those derided. It is scarcely wise or logical to laud and support manufacturers who secretly put up thousands of private formulas, secret drugs, and "specialties" for the quacks, and then abuse



the quacks for selling them. And especially if the quacks sell them to physicians!

With open eyes read the official address of President Bryant, before your own State Medical Society, and note the implication, and the between-the-line protests—protests hampered and modified by many and powerful necessities and limitations. When you have finished this reading get and read last week's address at Atlantic City of the same president. It is the most amazing mass of bombastic fudge and ungrammatic mystification. It is plain that a reorganization of the reorganization is required.

If one looks at them discriminatingly, these big medical gatherings are pretty bad and more silly. The big nonleading leaders encourage them in order to show off; the me-toos imitate their leaders; science is made the excuse for a lot of crass advertising, and worse ethics.

#### *Our Profession Needs Real Men*

What above all is needed is physicians who are not afraid of traditional prejudices and entrenched authorities, men who cannot be intimidated either by their own ambitions and selfishness or by the tyranny of conservatism and medical politics, medical societies, organizations, or fashions; men who will speak out and act as their own consciences demand upon all professional questions. It is plain that the profession is too much taking on the depraved habits of the worldlings about us, of the craze for luxury and success which has bitten the majority of Americans.

The practice of medicine is a holy calling, a vocation; the majority hold it so; the leaders, the few, make of it an avocation, the tool of "success." We must stop that sort of disgrace. The leaders have been practising medicine for success, or what is the same thing, for money. Now, the professional murderer, Orchard, has shown that for the sake of money alone he failed to be a successful murderer. Emotion and "soul" is necessary in any calling, even in Medicine, or even in Murdering. In view of the short life-length of our people, observing that for every premature death there are two

years of sickness, seeing the 10,000 of our suicides, and the many thousands of the mangled and killed by our railroads, it grows to recognition that civilization is a ferocious cannibal, mad with luxury and greed, devouring the millions of unfortunates who do not "succeed." The only withstanding forces against this gluttony of death are religion and medicine. The physician who practises medicine merely as a means of getting on, for money, for fame, for selfishness, and success, is a traitor to his profession. As individuals the divine command may be obeyed, that we may really find our life by losing it. It is an old, hard-worn truth that diseases are the warnings of the broken laws of ethics and physiology.

There is no punishment for suicide when the man is dead. The old pathology ignored the functional causes of death and busied itself only with the crude instruments, the terminal diseases, with which the suiciding weakling killed himself. The present sicknesses of the profession are today in their functional and curable stages, but heroic therapeutics are needed to prevent the inevitable and incurable organic diseases. The rise of the social diseases called eddyism, osteopathy, and the rest, show how far we have all gone. The luxuriant growth of crude quackery outside of the profession is the direct result of subtle quackery within it; and it is because we have not heeded the command, *Physician, heal thyself*, that we have become so infested with the parasites of unfaith-cure, bone-punching, and unchristian unscience.

#### *Our Legislative Failures*

Did it ever come to your mind that our long, great and valiant fight for medical registration, state boards of examination, four-year courses, for medical organization and dignity, has ended in utter failure? We are just where we began twenty years ago. Then the Sick Citizen had a choice between quacks and regular practitioners and the law could not be invoked to "protect the citizen from greed and ignorance." To bring about registration, etc., one large

school of irregulars had to be taken into the legal fold. There was much nausea on the one side, much jubilation on the other. How is it now? The law now demands the legalization of osteopaths, and eddyites, and Albany (not Heaven) only knows what other forms of Healers and healers.

"Progress," then, is steadily giving the former illegal and despised quack a legal and professional status. Isn't that an atrociously funny result of the generation-long demand for professional exclusiveness and registration? But only sillies can fail to see that it is leading to the right of the citizen to choose his doctor, or his quack, or his murderer, as he pleases. And nothing in earth or heaven can prevent this democracy.

*The Increase of Quackery Inside the  
Medical Profession.*

There are so many quacks within the profession that a sick man must choose carefully if he sticks to the regulars. The law has validated the larger choice, and trades-unionism in our ranks has killed our own courage to withstand the demand for the legalization of quackery. Riotous individualism, whether good or bad, is simply a fact! So the science of the textbooks, of the "leaders," and of the laboratory can help us little when it comes to the morbidities of our professional life, and of our patients.

We find in our extremity that professionalism, the new form of deism called LL. D.-ism, cannot help us, and that the patient is always an individual; his disease, unlike that of any other, and the turgid and glittering rhetoric of the self-advertising parade-writers is not helpful to us. The modest, dutiful general practitioner, especially of the smaller cities, towns and country, is likely to stand in awe of the famous city authority with sesquipedalian verbiage and titles. Professional enlightenment and progress needs that the general practitioner shall rid himself of that awe and shall demand back from the specialists the clothes of which he has been robbed—not only his cloak, but his coat, his waistcoat also, and trousers, possibly, which have gone city-

wards in too reckless haste. The general or family physician is still in the majority, and he is the backbone of the profession, and the hope of curing our pitiful professional scoliosis rests with this true orthopedist.

The entire ten commandments of the professional decalog are daily smashed to smithereens by the professors and LL. D.'s, and there is little to be expected for the dignity of our vocation except in the native vigor of mind and honesty of heart of the family physician. Abolish most specialism! Live to your ideals and cure your individual patient in your individual way of his individual disease. And of all unholy stupidities do not believe there is no cure. *The cure and the prevention of disease, of most all the diseases which curse our world, is possible. Perhaps not by the methods you suspect or have tried, but still, really, by some method.*

*If You Believe No Disease Curable—  
Get Out!*

There are two ways of committing professional suicide: The first by therapeutic pessimism, the method of the old pathology, the degraded neurology, the criminal old surgery, and the unspeakable old ophthalmology; and these have almost brought medicine to death, have resulted in a state of mind in the community in which millions of people only wish to learn what the medical profession hates in order that they may love it. Your "leaders" are murdering your profession. If you believe no disease preventable and curable, for man's sake get out of medicine and go into the gambling, bucket-shop or politician's business. The second method is actually to prevent and incidentally to cure disease so that sickness will disappear. This last is the physician's way to find his life by losing it, and is a glorious way of living and dying. The causes of the diseases which produce the larger part of the sickness, misery, poverty, crime, and early death of the world are now known. But the self-made, and self-elected, leaders of the profession know nothing of these causes and hate with bitter

hatred those who do know these causes, and who know that most all disease is preventable and curable. "Distrust your leaders" is the beginning of medical wisdom. Look out for yourself, disabuse your minds of prejudices, and "laws," and "rules," and individualize every case of disease you have. Never generalize, as the poor "scientist" does, but study each single case as if no other existed.

### *Cling to the Idealism of Your Youth*

Over all and above all, cling to the ideal of your profession being a calling, a vocation, from a source higher than the love of success and fame and money. Cling to the idealism and religious purity of your youth, to the love of your suffering fellowmen which lingers in the silent depths of your soul as all that makes your soul valuable and breeds its immortality. If you do not love your patients you will not cure them. Sympathy and kindness is the condition of therapeutics. These professors and ambitious self-seekers are mostly either hypocritical or outspoken atheists. There is no god that will authorize diabolism in the name of medicine or humanity. So these scamps who practise medicine for themselves rather than their patients must get rid of gods and God. If the love of God and the belief in Him has gone out of your heart, the love of your fellows and pity for their lot will swiftly follow. Without religion, without compassion, there is no abiding medical knowledge, no lasting art of healing. Most of these neurologists with their sneer of "hysteria", when they cannot cure, and of "neurasthenia", when they do not know, most of these laboratory and ultrascientific men, are materialists; they have no ideals, and real self-sacrifice is to them impossible; most of these alienists who sell their psychiatry for an advocate's fee, most of these surgeons who would operate even for "operation *per se*,"—plus a big fee—a majority of these leaders are materialists whose souls or psyches deny psychic things in their patients; their real failure is as certain as that physical disease

springs usually from psychic causes. These pseudo-professional men are living on the inherited virtues or soul-wealth of their genuinely professional ancestors. Every act and desire of their life is cunningly selfish instead of openly benevolent. The most depraved physician I ever knew did the most praying and gave the most money in supposed charity.

### *The Prayer of Maimonides*

Some seven hundred years ago a non-christian physician was also a prayerful, but genuinely religious man. His heart and mind were fervent with love of his brother-men, and with compassion for their physical woes. He was also most zealous in science, eager to unlearn his errors, watchful for new truth, earnest in wishing to add to the vast body of impersonal objective truth called Science—Science which shall finally, Science which can only, heal the mighty patient, Humanity, of its ills. Hallowed by the impassioned spirit of Holy Medicine, this noble physician thus invoked his God, our God, and the God of true Science:

"*Thy Eternal Providence,*" said Maimonides, "*has appointed me to watch over the life and health of Thy Creatures. May the love for my art actuate me at all times; may neither avarice, nor miserliness, nor the thirst for glory, or for a great reputation engage my mind; for the enemies of Truth and Philanthropy could easily deceive me and make me forgetful of my lofty aim of doing good to Thy children. May I never see in the patient anything else but a fellow-creature in pain. Grant me strength, time, and opportunity always to correct what I have acquired, always to extend its domain; for knowledge is immense and the spirit of man can extend infinitely to enrich itself daily with new requirements. Today he can discover his errors of yesterday, and tomorrow he may obtain new light on what he thinks himself sure of today. O God, Thou hast appointed me to watch over the life and death of Thy creatures; here I am ready for my vocation.*"

# THE STORY OF THE CLINIC

How and why it came into existence, its marvellous growth and the reasons for its success, by the man principally responsible for what it is

By WALLACE G. ABBOTT, M. D., Chicago, Illinois

I HAVE been asked by members of the "cabinet" to tell briefly, in this our "Special Progress Number," "The Story of THE CLINIC." Should I go fully into the details it would take every page of this issue, and even then "the story not half told"; and although it would be a labor of love, I must not sacrifice that greater part of "the story" which is told by my friends—many of them of long years' standing—on other pages.

The difficulties surrounding this task are obvious. They are those of a man who is still alive and kicking (and I have the reputation of being rather a lively kicker) "rising in meetin'" to praise his own good works, for to give the facts fully I must needs talk of myself. This resolves itself into an introspection of the introspected—hence my hesitancy! But believing that "whosoever tooteth not his own horn, the same shall not be tooted," and putting all modesty aside (of the possession of which, to any marked degree, I was never accused) I speak in general terms of things which many of you know, leaving you to supply the "filling" where it is needed.

To connect THE CLINIC and, with it, alkaloidal medication with the very first known and recognized movement in America takes me back to years and circumstances which in the hurry of life have almost been forgotten, and these I will give in the words of the chief actor, my honored, long-time friend and now close confidential associate, Dr. W. T. Thackeray, who in response to my invitation to tell the story to suit himself, says:

## *Dr. Thackeray's Story*

"In 1888 (I think it was) I was in St. Louis attending the meeting of the Ameri-

can Medical Association, held in that city that year. While there I met a Dr. M. E. Chartier, who called my attention to a medicine case which he had, the contents of which, at first sight, appeared to me to be homeopathic in dosage, and I so stated. However, he asked me to dissolve in my mouth one of the granules, which he took from one of the bottles, and upon doing so I was made positively aware of the fact that I had taken a dose of aconitine, and I admitted the fact to him. He then remarked, 'Now, Doctor, I shall be pleased to show you the further power of these little granules and ask that you now dissolve in your mouth another one which I herewith give you.' I complied with his request, and in probably two or three minutes saliva was in evidence as well as a decided sudorific action all over the body, indicating jaborandi effects, both of which I recognized without difficulty. I was then informed that I had in the first instance taken aconitine and in the second pilocarpine.

"He then outlined to me the Burggraevian idea of the use of active principles in therapeutics. The idea appealed to me seriously, and before I left St. Louis I had purchased from Dr. Chartier his machinery and such stock as he had on hand, with the idea of presenting them to the, then managers of my employers, Parke, Davis & Company of Detroit. This I did at a later date, but was met with the remark: 'Doctor, we believe in the idea which you present but the success of this system means the death of the galenicals, and you know our money is in them.'

"Now, as I had invested my own money in the purchase of Dr. Chartier's outfit, I saw that my only plan was to enter into

the manufacture of these goods myself, and as a consequence I interested a few Chicago physicians, notably Dr. C. C. P. Silva, and we organized what was known as the Metric Granule Company, now long since dead. This company was fairly successful during the first two years of its existence, during which time I had the pleasure of interesting Dr. W. C. Abbott in the work and entered into a contract with him to manufacture, among other things, granules of the sulphocarbolates for his personal use. However, about this time some dissensions arose in the company and I sold out my interest. Dr. Abbott, calling upon the Metric Granule Company for the fulfillment of my contract with him, was met with the statement that the company declined to fill the contract at the agreed price, and Dr. Abbott determined, then and there, as I have been since informed, to go into the manufacture of the remedies on his own account.

"After quitting the Metric Granule Company I entered largely into the manufacture of granular effervescent salts and later added a line of alkaloidal granules. During this last venture I recognized the necessity for a journal upon alkaloidal medication and decided upon the name, 'THE ALKALOIDAL CLINIC,' which journal was first published in 1891 or 1892, there being but six issues distributed by me.

At the beginning of 1893, the financial panic forcing me out of business, I accepted the position of Division Superintendent with the World's Columbian Exposition. During my term of office I met Dr. Abbott on the street one day and he asked me what I intended to do with

'THE ALKALOIDAL CLINIC.' I told him 'nothing,' that if he wanted it and would publish it, it was his. The rest you know.

"Varied experiences have been my lot since my meeting with Dr. Chartier in St. Louis up to the present time, when I enjoy a position of trust and honor with my friend Dr. W. C. Abbott, to whom during the whole period of his most successful business career I have lent what aid and information I could for the benefit of alkaloidal medication.

My pen, my brain, my physical being have been and are still at his service, and while dictating these lines I am preparing for a tour in Europe in his interest as well, as I believe, in the interest of the medical profession of America."

This puts you in possession of some in-

teresting facts concerning the early history of alkaloidal medication in America. Some time prior to this, I have been credibly informed, "dosimetry" was first brought to the United States by J. Pierpont Morgan. While in Paris the great financier had been treated for a troublesome illness, by a physician who had adopted Burgraeve's ideas



W. T. THACKERAY, A. M., M. D.

Aside from his connection with the history of the alkaloidal movement Major Thackeray has had an interesting and adventurous career. He is a civil war veteran, was for many years a medical officer in the U. S. Army, and served as Chief Surgeon in Don Carlos' army in Spain. The uniform he wears is that of 'Uncle Sam'.

and methods. Morgan was so impressed with the advantages of the method that he proposed to bring it to America. Accordingly he purchased the copyright of Castro's book on Dosimetry, had it translated, and in connection with Vanderbilt and Appleton published it here. When this was done, they found that instead of a work calculated for the laity it was strictly a medical book,



MY FIRST "STAFF"

Taken on the back porch of my house which, 12 years ago, was laboratory and editorial sanctum, as well as home and "the doctor's" office.

designed and suitable only for the medical profession. The book had some circulation, but its success by no means met the anticipations of the gentlemen who produced it.

Several attempts were subsequently made to introduce "dosimetry" on this side and to popularize it with the medical profession. An agency of the French manufacturer, Chantaud, was established in New York City, and for some years they published a small journal, mainly a reprint of *La Dosimetrie* in the French, and called "*The Dosimetric Medical Review*." Following the French, several firms endeavored to manufacture and introduce the dosimetric granules in America, but for some reason or other, or until I launched my effort, these efforts ended in signal failure.

In 1894, as Dr. Thackeray has related, I found that the way was open for the use of the name I desired for a journal advocating alkaloidal therapy, "THE ALKALOIDAL CLINIC." I had been making the granules for some time before this, commencing in the smallest possible way, advertising similarly, feeling my way with the utmost caution. Trying to avoid the mistakes made by my predecessors who had tried and failed. Instead

of preaching in a didactic way to the alleged leaders of the profession, I went directly to the profession itself, to the rank and file, to the men who were doing the work in the clinical field.

### *Something More Than a "Business" to Me*

To me alkaloidal therapy was always something more than a "business"—a commercial enterprise. It was a great therapeutic movement. I felt it to be my work—my "mission" in life. I tried from the very first to interest physicians in it from this point of view, to instil into their minds the fundamental ideas and help them in their application. As a result of this effort I had built up an extensive personal correspondence, and THE CLINIC came as an effort to get away from this, for time and again have I written at night, and at all times with the pen, till my fingers swelled so that I could scarcely close them. It came to a pass where I felt that I must have a better way of talking to my friends—and THE CLINIC was simply a medium for saying to the many the things which I had already been writing and talking to the few.

When I spoke to my friends about my project of starting a medical journal along these distinctive and to them peculiar lines, nearly all tried to dissuade me, saying that no one wanted alkaloidal medication, that it was iconoclastic, would meet with the opposition of vested interests, must overcome the inertia of the fixed medical orthodoxy of the times, that it would not pay—and that others had tried it and failed.

My reply to this was, "I haven't tried it, have I? I haven't failed, have I?" And when they said "No," I assured them that I was not going to fail, that failure wasn't in my makeup, the word not in my vocabulary. Of results let my work speak.

The first number of THE ALKALOIDAL CLINIC, under my supervision, appeared in January, 1894. It was a modest effort of twelve pages, the entire editorial "say-so" being confined to the first page. The contributors to this number were Drs. W. C. Buckley, W. F. Waugh, J. B. Justice, A. A. C. Williams and C. C. Stephenson; and there

were besides more than half a page of encouraging "letters from the field," from those I had made friends in the profession, in the manner already described.

For the first year or two *The CLINIC* was "set" by a friend, who himself was struggling with a little publication of his own, in an attic room in Ravenswood; the press-work was done "down-town" and it was mailed out from my own house (which was also my office) first to some sixty doctors, who in response to my suggestion had sent me in their subscriptions confidentially. Sample copies were also sent to others.

From this small beginning, its circulation, through hard work and with the kindly helpfulness of earnest doctors in the field, has grown up, through the various phases that have been and are obvious to you all, to its present position as a leader in advanced therapeutic thought in the Medicine of America.

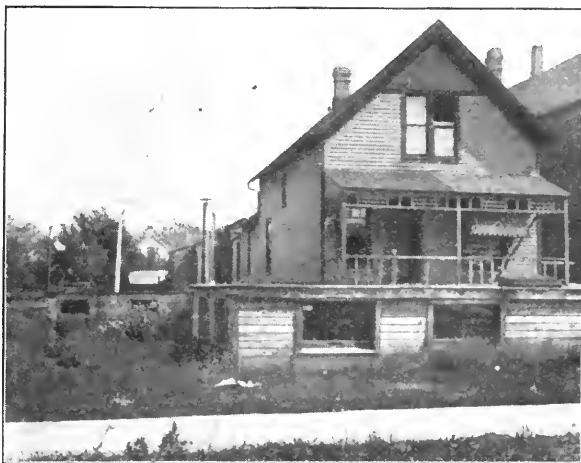
From this modest beginning the course of this journal has been steadily onward and upward. It has increased rapidly in every manner. Its pages now contain articles from the best men in the medical profession, while the "rank and file", its original supporters and even its best friends are by no means neglected, each issue containing a condensed mass of useful matter coming direct from clinical experience. Every month it becomes more and more difficult to select from the enormous mass presenting that which seems most to merit insertion and most appropriate for the occasion, most likely in all ways to aid the readers of the journal in their great work of preventing death and relieving suffering.

I have associated with me able, earnest workers in a strong force. Much credit is due Dr. Wm. F. Waugh, who contributed to the first number, then later, first as editor of *THE CLINIC*, and still later in other capacities, has been associated with me for many years; and the names in our editorial cabi-

net, as well as the names affixed to articles and correspondence in the pages of *CLINICAL MEDICINE* are those of earnest, able, faithful men who in their various situations and capacities have contributed mightily to the success of this enterprise. I am grateful to all of them—to all of you!

In the early days Dr. John Aulde contributed to the success of the journal, as did Dr. W. C. Buckley. Prof. Shaller, of Cincinnati, came in a few years later and his work still forms an important part of the literature of the active-principle movement.

For twelve years this journal was published as *THE ALKALOIDAL CLINIC*, but at the beginning of 1906 its name was changed to that which it now bears. Although first instituted for the express purpose of advocating the use of the active principles in medicine, it promptly outgrew its original design, and became identified with the much



THE CLINIC'S FIRST REAL HOME

My! Didn't we feel big when we had moved into these quarters, office and composing room upstairs, press room below.

wider field, that of promoting the use of all accurate medicinal agencies in an accurate way. We found ourselves in later years constantly endeavoring to explain to many inquirers that we did not advocate and had never advocated the exclusive use of the alkaloids in the practice of medicine. As long as we maintained the old name, people persisted in attributing to us the design of erecting a new medical sect. We have

always consistently held to the doctrine that it was the duty of the physician to use not only the alkaloids but *everything* which would enable him to better do his work, to restrict himself in no way excepting as the interests of his patients demanded; and it was in recognition of this fact that we finally assumed the broad title of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, as exactly expressive of the field we occupy.

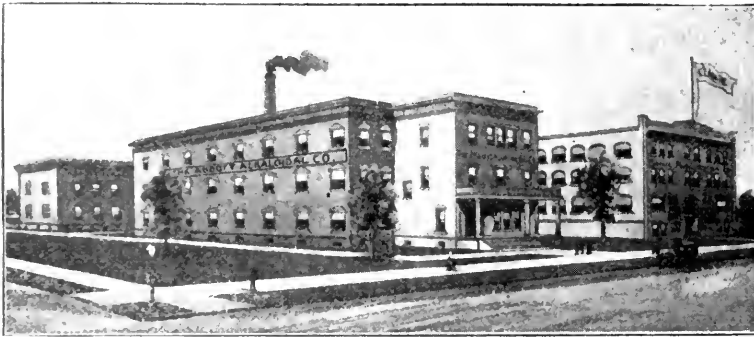
During the fourteen years in which this journal has been in existence, we have seen drug therapeut'cs, which had gone completely out of practice, revive. All over the world men are now talking of this revival. The best men in the profession are protesting against the pessimism which had

From its first issue this journal has been characterized by its robust optimism, by its faith in well-directed therapeutic measures, this faith being based upon the use of therapeutic certainties as reliable as the finely tempered steel of the surgeon's instruments; and by the tremendous energy with which its beliefs have been pushed.

### *We Want What is Right*

In all things we have most earnestly sought to be right. If we were wrong, or if we did not know that we were right or wrong, we have gone to those we believed most able to help us, by no means neglecting to add to the information thus received the results of our own experience and observation, and

our own reasoning powers. We have never felt or shown the conceit of looking upon ourselves as always right. In fact, we believe that we have been humble in our own estimation of our own powers. All we have asked was that those who knew more than



Showing our plant (the home of *THE CLINIC* at your right) after ten years of the hardest kind of hard work.

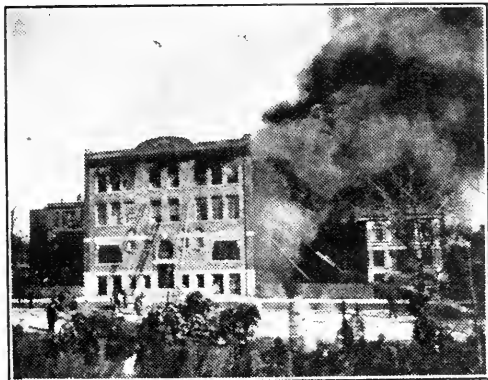
paralyzed medical endeavor, the nihilism which had reduced the physician from an active participant in the conflict to the position of a more or less (rather less) interested spectator. It is this journal, and the men who are concerned in it, who have fought this idea; and to them may be attributed the credit of having aroused that sentiment in the profession which is now steadily recovering its sway, that of optimism, of hopefulness, of earnest endeavor to do our highest duty by our patients; and that duty consists not in looking on, not in diagnosing the case and then stopping, but, along with this, in actively intervening for the benefit of our patient to the extent of our ability; this ability to be based upon a correct appreciation of the pathologic condition, and the proper application of correct remedies.

we should put us right, believing that if they were right they ought to be able to show it to those who were searching absolutely and singly for the truth, not desiring to establish any preconceived views of their own whatsoever.

The influence of *THE CLINIC* has grown steadily with every month since its first issue, until its clientele now embraces fully one-fourth of the active physicians of the United States. It has been our desire to associate every one of these with our work, to learn from each one of them what he or she knows and add it to the common stock of the entire number. We have constituted the readers of this journal an enormous collective investigation club, believing that in this way as in no other can absolute truth be approximated. For no matter how wide the



experience of any one man, he is still only one; and no human being can possibly contain within the scope of his own brain the



OUR 'SURPRISE PARTY' NOV. 9th, 1905

knowledge which could be found by gathering together that of many thousands of other men, as good or better.

In this way we have held close to the body of the profession, and if at times our own views have differed from those usually esteemed "authority" in the profession, this has been through no conceit of ours but because the weight of the testimony presented to us from these numberless sources overwhelmingly justified us in the position we had taken. We look upon ourselves as the mouth-pieces of the profession as a mass, not of any class. While we have taught our friends we have learned from them at the same time, and in many instances the views we enunciate are simply giving back to the profession proven, what they have first given us. Our enormous piles of correspondence with physicians would, if we could lay them before our readers, fully justify us in every view which we uphold in this journal, and show why we hold to certain things more tenaciously and advocate certain remedial meas-

ures more energetically, than we do others. This is simply a reflex from the mass—mind of the profession, added to our own clinical tests, which have convinced us of the correctness of the conclusions reached.

The one thing which more than anything else has excited opposition to us, has been the connection of the leaders of this alkaloidal movement with The Abbott Alkaloidal Company, with which I am also connected. This has given some faint color to our opponents for the allegation that this advocacy of ours is a money-making scheme.

Dosimetry began with Burggraeve, a retired surgeon of the University of Ghent, in Belgium. For years Prof. Burggraeve advocated this reform among his own friends and throughout his own sphere of influence. The results were scarcely a ripple on the surface of the medical body, until he transferred himself to Paris and formed an association with a manufacturing house there. This put the matter out of the realm of academic disquisition and into that of the actual world of practice. Burggraeve



THE DAY AFTER THE FIRE



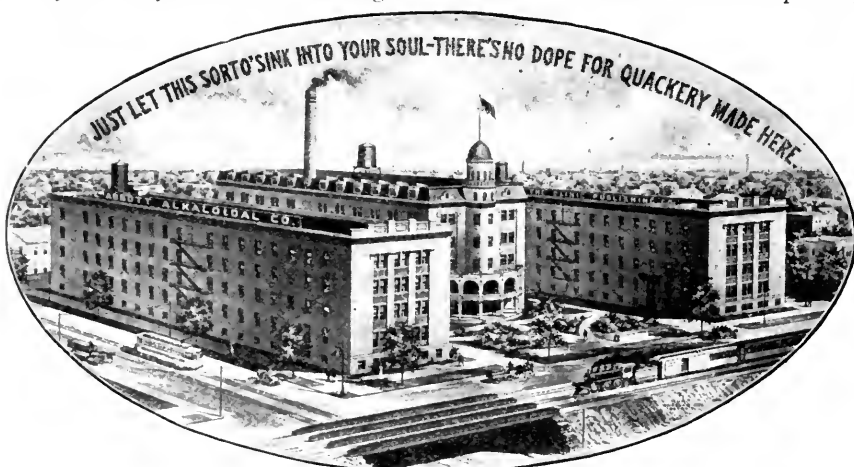
STARTING IMMEDIATELY TO REBUILD

could then recommend the very alkaloids he employed, and the physician who was inter-

ested could obtain these same alkaloids in exactly the shape and of exactly the standard strength that Burggraave himself used them. This and this alone gave real definite shape to the enterprise, and it was not long thereafter before dosimetry flourished throughout France, Belgium, Italy and Spain, penetrating to a lesser extent to every other country of Europe, and crossing the ocean to our own.

The same necessity existed here, that of a supply house where these potent medicaments can be obtained of absolutely uniform standard quality, the doses never varying from year to year in their strength.

that a single dose of one may be one-thousandth of a grain, a single dose of another fifteen grains; a number of others occupying intermediate positions between these extremes. This is not a solitary instance—there are plenty of others. Strophanthin as found in the market a few years ago varied in strength over a scale reaching from one to ninety. A resort to the open market for these articles, therefore, threw the physician directly back into the slough of uncertainty from which we were seeking to rescue him, that of being compelled to test anew every remedy he used whenever he obtained a new prescription.



Through various ups and downs, but always climbing, and in less than four months following our fire, THE CLINIC was (and still is) "at home" in the beautiful building at your right which, with all its "busy-ness," houses one of the most perfect publishing plants in the west. The building at your left, the to-be-home of The Abbott Alkaloidal Co. is near completion, after which, the old wood structure shown in the center of the picture on page 34, will give way to the fine central administration building here shown. Remember that our latch-string is always out.

This we have endeavored to supply. Without this, if the physician to whom alkaloids are recommended undertakes to go out into the market and take his chance of securing them, in whatever condition and whatever strength the average pharmacist chooses to or can give them, the result would be the absolute impossibility of at all times obtaining exact results; and the consequence would be the death of the physician's interest, and likely his return to the old, worn-out, useless, obsolete medicaments of our grandparents.

Take, for instance, aconitine. Under this name there are found in the market preparations varying in strength so much

Be this as it may, the movement in the minds of all fair-minded physicians has been absolutely relieved of the suspicion of commercialism by the simple fact that not one of the remedies employed by the alkaloidists is patented or secret, and that the physician is perfectly free if he chooses to go to any source of supply whatsoever to obtain them. This cannot be truthfully said of the remedies so strongly urged upon the profession by those who most venomously attack the alkaloids. There's a reason.

As to what we have accomplished, our readers scarcely need to be told. We have studied the vegetable materia medica, which had fallen into absolute disuse; we have

rescued it from its obscurity; have thrown overboard the ancient, uncertain preparations which had been the occasion of the distrust of therapeutics on the part of physician and patient alike; we have presented these valuable weapons in new, modern style; we have founded a new, drug therapeutics on an absolutely scientific basis; we have placed in the hands of the physician perfect tools for his use, of the finest temper, so differentiated as to allow him to make with absolute precision the applications which he may need. We have rearoused faith in therapeutics by giving the profession a therapeutics which deserves faith. We have encouraged the profession to resume its old commanding position in the sick-room; we have urged them to intervene promptly, powerfully and effectively, for the patients' benefit, and have placed in their hands the means of doing it with safety and decision. By thus giving the physician means to combat disease of every description more effectively than ever before, by furnishing him with weapons that none but he can wield, we have brought back the conflict into the sick-room, in which he reigns supreme. We have rescued the derided doctrine of intestinal antisepsis from neglect; and by steadily adhering to what we knew to be true, by the study of our own clinical observations on this point, we have lived to see the profession come to our standpoint, in this particular at least.

The profession has come to our standpoint in many other particulars; and they are coming more and more every day. It would be edifying to any curious reader who has the time, to take the earlier issues of *THE ALKALOIDAL CLINIC* and compare the doctrines taught therein with those presented by other medical journals of that day, and by the text-books of the day, and then with the journals and the books of the present time.

We strongly urged attention to the vasomotors, and the vasomotor disequilibrium manifested in disease of many varieties. Take the current medical literature of the day and note how much attention is given to this topic, and how universally the foremost writers of the day agree with us as to the importance we place upon this clinical feature.

Do not imagine that a revolution like this can be made without somebody being hurt. Somebody is being hurt, and probably the loudness of the howling going on in some quarters may, if traced to its source, reveal who this somebody is. There is a good deal of money invested in plants for the production of this old, worthless trash, formerly denominated medicine (fit dope for quackery), and this costly apparatus, except it be kept for the quackish purposes for which it is so largely used, is going to the scrap-heap as surely as the alkaloidal idea will prevail. There are many vested business interests that are going to be hurt, and are hurt, by the success of alkaloidal therapy; and naturally the people whose interests are thus vested, likewise their aiders and abettors who are also being hurt, don't like it, not a bit. But it cannot be helped.

The medical profession has one test to apply to all such controversies—it stands ready to take the side of the one who furnishes it the better means of practising medicine. All other considerations fail, when presented to the bulk of the profession, however potent they may be with any one man or even with a set of men. We have strictly followed the line we have felt and now known to be right; we have gone ahead and we expect to go ahead till the end of our days. For a time we were lonesome, but faith and purpose were good company; now merging paths of thought and action are rapidly leading the multitude into this, the better way.

#### THE MAN WHO WINS

The man who wins is the man who wears  
A smile to cover his burden of cares;  
Who buckles down to a pile of work  
And never gives up and never will shirk.  
The man who wins is the man who does,  
The man who makes things hum and buzz,

The man who works and the man who acts,  
Who builds on a basis of solid facts;  
Who doesn't sit down to mope and dream,  
Who humps ahead with the force of steam,  
Who hasn't the time to fuss and fret,  
But gets there every time—you bet!

# PRESENT-DAY THERAPEUTIC ANARCHY

The criticism that is helpful and the criticism that does harm: let us have more of the former and less of the latter. The future of therapeutics rests with those who build up, not with those who tear down

By REYNOLD WEBB WILCOX, M. D., LL. D., New York

Professor of Medicine at the Post-Graduate Medical School and Hospital; Physician to St. Mark's Hospital; Author of "Pharmacology and Therapeutics," "Treatment of Disease," etc.

IT was said by an eminent French writer that America was the country in which all social, political and economic experiments were to be tried. We have had many years of therapeutic nihilism and we are now emerging from the despair of the dead-house. This problem has solved itself with the aid of the common-sense of the American people. He who proclaimed that nothing could be done for the cure of disease or alleviation of symptoms simply published the fact that he did not know anything of the productive part of his art—science, and the synonym for therapeutic nihilist became therapeutic ignoramus. While the sick man might have a languid, academic interest in pathology he was imbued with a keen interest in whatever was likely to tend to improvement, so that nihilism died a natural and unlamented death.

## *The Sins of the Few Visited upon the Many*

Now we are confronted with another experiment, to determine how much the healing art can advance when groups of workers are set against each other and mutual distrust is created. It is acknowledged that we have, owing to the unselfish devotion of workers in various allied fields, the best Pharmacopeia in the world, and that we have efficient laws to oblige compliance with the rubrics of the law-book of pharmacy and medicine, and yet doubt is cast upon the honesty and sincerity of drug manufacture. Doubtless all manufacturers do not come up to the high standard set for medicinal products, but the sins of the small minority are insufficient to cover the splendid work of the great majority; and, likewise, delinquency in a compara-

tively insignificant product of a given manufacturer should not discredit his entire output.

It is difficult to imagine why drugs are singled out and held up to reproach when it is considered of no importance that over-exploited health resorts and mineral springs, private hospitals for questionable practices and fraudulent medical schools are freely advertised. Physical therapy has made enormous strides and has been of marked benefit in the treatment of disease, yet the few extravagant claims have been unnoticed. If the sins of the few are so visited upon the many in one department allied to medicine the question naturally arises why all are not treated alike.

We are now suffering widespread financial discomfort owing to the unwisdom in certain quarters. We are bearing those ills with fortitude because the honesty of the cause is unquestioned. When the conditions became acute those whose financial methods have been most fiercely assailed, disregarding their own interests or feelings, came to the rescue and saved the credit of the financial world. This was done because the evils resulted from unwisdom, but honest unwisdom. It so happened recently, that on the same evening there was a meeting of the most powerful financiers and another of the most aristocratic of the hereditary societies, and in both the name of one to whom, rightfully or wrongfully, is ascribed the cause of prevailing discomfort, was received in silence.

## *Unworthy, and Unscientific Criticism*

When, however, the criticism is anonymous, bears the earmarks of previous bias, or transcends the bounds of dignified

scientific communications, other reception of the authors of distrust must be expected. Communications from discharged employees or from servants who employ their master's money to defame him, or from investigators who decline to avail themselves of proffered corrections, create only distrust and do not add to the advance which is expected to go on in science. If a young laboratory worker starts with the proposition that a drug is inert because some one else has stated as a fact that it is, he may be pardoned, because he may not know the conditions which made the conclusion seem a just one. But when, as a second proposition, he declares that the drug did not receive official recognition because it was inert, he also states a fact, but the reason was not as stated, as he might easily have learned from any one of those who took part in deciding the question. Then laboratory experiments were undertaken and the preconceived conclusion reached.

A negative result proves nothing beyond the fact that a particular observer working on particular material obtained no results. When an experienced worker taking the first preparation at hand proves by demonstration, with an instrument of precision, that this preparation is active and gives definite pharmacological results the value of the negative conclusion becomes *nil*. The failure to obtain results might be assumed to be due to the inexperience of the observer. If, however, an offer to show that his two original propositions are incorrect and to furnish him with material which is active is ignored, the presumption may be that his negative conclusions are not so entirely trustworthy as would be expected from an investigation ostensibly carried on to ascertain the truth and nothing else. And it is exceedingly dangerous to reputation to publish a negative conclusion

when a positive one can be mathematically demonstrated. A careful study of other alleged scientific investigations might yield similar results.

American medicine rests upon the self-sacrificing work of all who contribute directly or indirectly to its advance and those who create distrust, either through ignorance or worse, must not expect the objects of



DR. REYNOLD WEBB WILCOX

anonymous misrepresentation to build up the structure which they have done their best to tear down. The future of therapeutics rests with men who try to find out the truth and are ready to place their names upon their work. Errors there will be, for no one is infallible, but malice has no place in any honest endeavor. That commercial interests are best served by a rigid adherence to scientific accuracy is proved

by the vast amount of work which is being done in commercial laboratories. No one who has ever served on the revision committee of the United States Pharmacopeia, and thus acquired a practical knowledge of what is being accomplished by the many workers in various fields and an apprecia-

tion of how thoroughly all endeavor is subordinated to scientific ends, would ever aid the destructive agencies which are temporarily prevalent. Those who are conducting iconoclastic campaigns should remember that the Ten Commandments have not as yet been superseded by any human code.

## WHY ALKALOIDAL THERAPY APPEALS TO ME

What this method of medication has done for me,  
and what, through me, it has done for others.  
Why every physician should be interested in it

By JOHN M. SHALLER, M. D., Denver, Colorado

Author of "A Therapeutic Guide to Alkaloidal Medication"

**A**CTIVE-PRINCIPLE therapeutics appeals to me, first, because it is *advanced* therapeutics. It appeals most strongly to me, because I have learned that physiological effects are produced more quickly by the use of dependable drugs in minimal, accurate doses, frequently repeated, than can be obtained through the administration of the drugstore remedies, as dispensed on prescription. The more rapidly physiological effects are produced, the more quickly are fever, pain, congestion and inflammation reduced, and the rhythm of pulse and respiration restored to normal—and this means rapid cure. In other words, you get "returns" more quickly and more pleasantly when the active-principle granules are employed. The method is absolutely a "short cut" to relief and cure.

Quick relief and rapid cures always inspire in the patient confidence in the physician, and through them there is established in the physician himself a firm belief in the remedial power of medicine. How often have we heard prescription-writing doctors declare that "medicines have no curative qualities." Is it not strange that these same physicians *keep on* giving their patients medicines which they believe without curative value, when they can easily at least try those that others find effective?

Active-principle therapeutics also appeals to me because of the form in which the

medicines are prepared. A large number of granules, of great variety, can be carried conveniently in a small pocket-case. Furthermore, patients, particularly children, are easily induced to take the granules or solutions of granules, because medicine given in this form is very palatable as compared with the nauseous doses of former years.

### *The Physician should Work for the Patient's Financial Interest*

It appeals to me in another way: Having been in the retail drug business before entering the practice of medicine, I obtained a thorough knowledge of the ways of that business. From the first I was amazed at the retail prices charged for medicines. I could not see the justice of charging fifty cents for what actually cost less than five. Later, in writing prescriptions, this fact appealed to me still more strongly. In many cases not more than one or two doses of a prescription were taken, the actual cost of the medicine being, possibly, one cent. The cost to the patient was from thirty to fifty cents. This seemed to me an unjust extravagance, forced on the patient by the physician, who should work in the interest of his patient in all things, not only in regard to his health but also in regard to his expenditures. This is not above the dignity of any true-hearted man. When a physi-

cian carries alkaloidal medicines, a few granules of such remedies as codeine, aconitine, calx iodata and emetine, costing a few cents only, are usually sufficient for a day's supply for one patient.

Of greater importance, however, is the fact that the patient receives the medicine at once and *gets just what is ordered*. A better impression is made upon the patient and his friends if the physician, himself, can give the first dose. If the symptoms are urgent or dangerous, the physician should remain until there is improvement. That doctor is most successful who gives personal attention to his patients.

Success is the art of pleasing. This is more quickly and more easily accomplished when the physician has at hand the most rapidly acting, the purest, the safest, the most palatable and the most effective kinds of medicines. This is not only good business (because it inspires confidence), but it is also the highest kind of medical art, for the patient is receiving the best possible treatment,—the most scientific, because the medicines are simple and pure, uniform in action, and the results are the best.

It has enabled me to cure my patients 'quickly and to abort many acute inflammatory diseases, particularly pneumonia.

It has greatly increased my reputation as a successful practitioner and thereby has increased my practice.

In out-of-the-way places in the Rockies I have saved several lives and relieved much suffering because of the twelve-vial case of alkaloidal granules which is my inseparable companion. A case of this kind contains a variety of granules sufficient to treat any emergency.

As an extensive writer for medical journals, as the author of the "Guide to Alkaloidal Medication," as a teacher of physiology and clinical medicine for many years,

there are many hundred practitioners who have been led through my efforts to adopt alkaloidal medication.

In teaching physiology, especially when considering the important part played by the vasomotor nerves in congestion, inflammation and pain, I have never lost an opportunity to show how aconitine, atropine and glonoin relieve these conditions by



DR. J. M. SHALLER

The Doctor contributed to the first number of *THE CLINIC* and has been writing for it and working with us ever since.

diverting the blood-supply from the affected areas into almost bloodless ones, by dilating contracted arteries and flushing the capillaries in parts remote from the congested center.

Every teacher is gratified to learn that some good has come from his efforts. In remote mining camps and towns I meet our students of former years, now sturdy, hard-worked physicians who use alkaloidal medication. At other times I have been

pleased to see in miners' cabins, far from civilization, a familiar sight—a can of saline laxative.

What does all this mean? That this effective form of medicine is valuable and productive of good; that its use is spreading because it gives satisfactory returns.

Then in large cities, even among medical teachers, I have been astonished to hear them say that "aconitine is a rank poison and under no conditions would they use internally so dangerous a medicine." This assertion simply shows that these men have had no personal experience with aconitine, and that they are quoting some one else who has never used this alkaloid. There is no medicine safer or more productive of good or more useful in the treatment of all acute inflammatory diseases, particularly those of childhood. Nothing is poisonous to human life unless used in poisonous doses. It is a physician's business to know when any medicine can kill.

There are fully 25,000 of the physicians of this country, or one-fourth of the entire number, who are using aconitine as a febrifuge, and cases of fatal poisoning are almost unknown. Compare this with the large number of cases of poisoning ascribed to the coal-tar derivatives, and the conclusion must be forcibly drawn that the latter product is more dangerous than aconitine and that it requires more care in its administration.

After many years of experience in alkaloidal medication, my parting advice is, study the action and results produced by amorphous aconitine. In general practice you will have better results, abort more diseases and obtain greater satisfaction from its use than from any other remedy. Use it in all acute, inflammatory diseases, particularly in the beginning of acute pneumonia. There is no medicine that can so effectually lower the death-rate of this very prevalent and dangerous disease.

## ANTISEPTICS AND ANTIPYRETICS

The relation of the molecular weight and the boiling point to the activity of the antiseptics and antipyretics. The remedial powers of our materia medica should be studied, not belittled

By THOMAS J. MAYS, M. D., Philadelphia, Pa.

**A**NTISEPTICS are substances which prevent or retard putrefaction or decomposition of animal and vegetable matter, and are also known as disinfectants, antiferments, antiputrescents, deodorizers, etc. This will serve as a definition, which is at least sufficiently accurate for our purposes.

All nongaseous antiseptics, which only are included in this discussion, have a high molecular weight and a high boiling point, so far as the latter can be ascertained. This is shown by the following groupings, in which are given: first, inorganic antiseptics; second, organic antiseptics; and third, organic nonantiseptics, with their chemical formulas, molecular weight and boiling points, respectively:

NAME	I. FORMULA	MOLECULAR WEIGHT
Bismuth benzoate	Bi (C <sub>7</sub> H <sub>5</sub> O <sub>2</sub> ) <sub>3</sub>	573.00
Iodoform	CHI <sub>3</sub>	392.56
Zinc sulphocarbolate	Zn (SO <sub>3</sub> C <sub>6</sub> H <sub>4</sub> OH) <sub>2</sub>	
	8H <sub>2</sub> O	346.00
Mercury salicylate	Hg (C <sub>7</sub> H <sub>4</sub> O <sub>3</sub> ) <sub>2</sub>	335.80
Zinc iodide	Zn I <sub>2</sub>	318.16
Mercury chlor., corros.	Hg Cl <sub>2</sub>	270.50
Mercury chlor., mild	Hg <sub>2</sub> Cl <sub>2</sub>	235.00

None of the above have a boiling point except mercury, which is 357.

NAME	II. FORMULA	MOLEC. WT.	BOILING PT. C.
Acid, benzoic anhyd.	C <sub>14</sub> H <sub>10</sub> O <sub>3</sub>	226	360°
Acetyl-thymol	C <sub>12</sub> H <sub>10</sub> O <sub>2</sub>	202	244°
Menthol	C <sub>10</sub> H <sub>20</sub> O	156	212°
Eucalyptol	C <sub>10</sub> H <sub>18</sub> O	154	177°
Thymol	C <sub>10</sub> H <sub>14</sub> O	150	165°
Guaiacol	C <sub>7</sub> H <sub>8</sub> O <sub>3</sub>	140	201°
Formaldehyde: acetate	C <sub>6</sub> H <sub>8</sub> O <sub>4</sub>	132	170°
Xylene	C <sub>8</sub> H <sub>10</sub>	106	140°
Acid, carbolic	C <sub>6</sub> H <sub>6</sub> O	94	170°



III.  
(NON-ANTISEPTICS)

NAME	FORMULA	MOLEC. WT	BOILING PT. C.
Amyl nitrite .....	$C_5H_{11}NO_2$	117	98°
Ethyl acetate .....	$C_4H_8O_2$	96	72°
Ethyl formate .....	$C_3H_6O_2$	80	55°
Ether .....	$C_4H_{10}O$	74	37°
Propyl aldehyde ....	$C_3H_6O$	64	48°
Ethyl aldehyde .....	$C_2H_5O$	49	22°
Acid hydrocyanic .....	$HCN$	27	26°

*Substances Having Highest Molecular Weight Most Antiseptic*

From the above grouping it appears that antiseptics of the highest molecular weight, as mercury and iodoform for example, are known to have the highest antiseptic power; that antiseptics of the highest antiseptic power probably also have the highest boiling point; and that on the whole, the boiling point rises and falls with the increase and diminution of the molecular weight. This means that the greater the molecular weight and the higher the boiling point of a therapeutic substance, the more physical inertness it possesses and the more pronounced is its antiseptic property. This certainly seems true from a physical standpoint and gives us good reason for believing that antiseptics act principally by virtue of their weight and physical inertia, and by the power with which they depress molecular, organic activity.

Such a mechanism of therapeutic action becomes clearer when we remind ourselves of the fact that cold is a most effective antiseptic and that no active sepsis or decomposition occurs in the presence of a freezing temperature. Now, it is well established that cold acts on or influences living matter physically by depressing or inhibiting its function, and from what has been stated it is obvious that antiseptics, in addition to the chemical affinity for albumin, which some possess, interfere with and depress physiologic activity in the same manner.

*What is Antipyresis?*

Whether or not the essential action of antiseptics is that of germicides, as is currently believed, will become more obvious after a consideration of antipyretic action.

What is antipyresis? This must be anticipated by the question, What is fever? Physiology teaches that the normal heat of the body is produced almost exclusively through oxidation, and that 80 percent of this quantity comes from oxidation which takes place in the muscular system. In fever this proportion of heat-production is increased. Fever is an excessive accumulation of heat in the body, either as a result of over-production of heat, or of diminished loss, or of both. In health a balance is maintained between heat-production and heat-loss by the thermotaxic mechanism, which is controlled by heat-centers residing in the cord and base of the brain. In fever this apparatus is disturbed. When the heat-centers are irritated fever follows.

Now, both muscular contraction and fever are the resultants of suddenly increased physical and chemical activity in muscular tissue. A muscle may be made to contract either by stimulating or irritating its fibers directly. Fever, as has been seen, may likewise be caused by irritation of the thermogenic nerve centers, and there is good reason for believing that the same phenomenon is provoked by poisonous irritants acting directly on the muscular fibers. So far as the mechanism of fever is concerned, then, it may be divided into two varieties; one which operates on the central nervous system, like the germ or toxin of some central fevers; and the other by irritating the muscular system direct, more or less independently of the nervous system, so far as this is possible, as in the case of rheumatism and allied affections.

*Analogy Between Muscular Contraction and Fever*

This close connection between muscular contraction and fever appears very striking when the elementary phenomena, which underlie and accompany the former, are compared with those which manifest themselves during the fever process, as is seen from the following:

1. Muscular contraction is accompanied by elevation of temperature, which, as a rule, is true of fever.

2. Muscular contraction and fever are accompanied by oxidation and by the production of carbon dioxide and lactic acid in excess.

3. Muscular contraction is the product of an explosive decomposition of nitrogenous tissue, and fever is chiefly the result of active decomposition of the same substance

4. Muscular contraction, fever and decomposition of nitrogenous tissue take place at a comparatively low temperature.

5. Muscular contraction, fever, organic oxidation, decomposition of nitrogenous tissue and an excessive discharge of carbon dioxide and lactic acid are incited by nervous impulses.

It may be said, then, that a morbid irritant of the brain and nervous system, like that of typhoid fever, quickly deflects its impulses to the unstable nitrogenous elements of the muscular system, and there, instead of producing muscular contraction, incites decomposition or fermentation, which gives rise to high heat and excessive discharge of carbon dioxide and lactic acid. On the other hand, the poison of rheumatic fever is a special irritant of the fibrous or serous tissues, like the joint-capsules, ligaments, tendons, tendinous sheaths, synovial membranes, sheaths of muscular fibers, etc., and, therefore, instead of being a central irritation that produces fever, like that of typhoid-fever poison, it is a peripheral incitor of fever.

In searching for the fundamental element in antipyretic action, this, as in the case of antiseptis, will be found in that property which depresses organic action, and of which the therapeutic behavior of cold is a notable representative. There is no question that so far as its physical influence is concerned, cold is as much the ideal antipyretic as it is the ideal antiseptic, but its practical application in many cases where antipyresis and antiseptis are indicated, is limited, and other agents which yield a similar therapeutic property take its place.

#### *Antipyretics Useful in Rheumatism*

Viewing antipyretics from a broad standpoint, it is evident that the tests of practical

experience have found certain febrifuges more useful in some than in other forms of fever, which has led to the segregation of this class of agents in fairly well defined groups. Thus, in the treatment of acute rheumatism, the following substances have been preferred:

#### IV.

NAME	FORMULA	MOLEC. WT.	BOILING PT. C.
Sodium salicylate	$\text{Na C}_7\text{H}_5\text{O}_3$	160.00	
Salicin.....	$\text{C}_{13}\text{H}_{18}\text{O}_7$	285.33	260°
Salol.....	$\text{C}_{13}\text{H}_{10}\text{O}_3$	213.49	420° Melts
Methyl salicylate.	$\text{C}_8\text{H}_8\text{O}_3$	151.64	220°
Salicylic acid ...	$\text{C}_7\text{H}_6\text{O}_3$	138.00	200°

All the agents in this list, except cold, are ternary, nonnitrogenous organic compounds, without a special affinity for the nervous system; have heavy molecular weights, high boiling points, so far as the latter can be ascertained; and all are administered in large doses, in order to obtain their antipyretic effect. Judging from the analogous action of antiseptics, there is no doubt that this group of antipyretics reduces the fever temperature of rheumatism chiefly by overwhelming the increased or exaggerated, molecular or cell activity in the fibromuscular tissues of the body, which is engendered by the rheumatic poison, whether this is a microorganism, uric acid or something else. Surely no one would contend that the cold bath or the application of ice, which are approved methods of treatment in this disease, have any other effect!

#### V.

NAME	FORMULA	MOLEC. WT.	BOILING PT. C.
Acetanilid.....	$\text{C}_8\text{H}_9\text{NO}$	134.73	295°
Antipyrin .....	$\text{C}_{11}\text{H}_{12}\text{N}_2\text{O}$	187.05	113° Melts
Phenacetin .....	$\text{C}_{10}\text{H}_{13}\text{NO}_2$	178.63	135° Melts

The members of group V, which represent quite a large number of antipyretics, consist of quarternary, nitrogenous organic compounds, possess heavy molecular weights and high boiling points, and produce their effects in medium large doses. Experiments prove that they reduce fever, not by allaying peripheral irritation, as is done by salicin, salicylic acid and other agents of the same class in rheumatic pyrexia, but by virtue of their depressing and paralyzing influences on the spinal nervous

system and on the thermogenic nerves, thus blocking the path by which disturbing impulses are transmitted from the central nervous system to the seat of heat-production in the muscular system, in the same manner as morphine prevents the conduction of impulses which would give rise to pain or abnormal muscular movements.

*Relative Efficiency of the Quinine Salts*

VI.		
NAME	FORMULA	MOLECULAR WEIGHT
Quinine sulphate:		
	$(C_{20}H_{24}N_2O_2 \cdot 3H_2O)_2 \cdot H_2SO_4 \cdot 7H_2O$	870.22
Cinchonidine sulphate:		
	$(C_{19}H_{22}N_2O)_2 \cdot H_2SO_4 \cdot 3H_2O$	738.52
Cinchonine sulphate:		
	$C_{19}H_{22}N_2O_2 \cdot H_2SO_4 \cdot 3H_2O$	720.56
Quinine bisulphate:		
	$C_{20}H_{24}N_2O_2 \cdot 3H_2O \cdot HSO_4 \cdot 7H_2O$	546.88
Quinine salicylate:		
	$C_{20}H_{24}N_2O_2 \cdot 3H_2OC_7H_6O_3$	516.00
Quinine benzoate:		
	$C_{20}H_{24}N_2O_2 \cdot 3H_2OC_7H_6O_2$	500.00
Cinchonidine salicylate:		
	$C_{19}H_{22}N_2OC_7H_6O_3$	432.00
Cinchonine benzoate:		
	$C_{19}H_{22}N_2OC_7H_6O_2$	416.00
Quinine hydrochloride:		
	$C_{20}H_{24}N_2O_2 \cdot 3H_2O \cdot HCl \cdot 2H_2O$	395.63

In group VI the cinchona salts are arranged in accordance with their molecular weights, the sulphates heading the list, while the hydrochloride stands at the bottom. This arrangement also seems to represent the respective therapeutic strength which has been ascribed to these compounds by clinical usage, for it appears that the sulphate preparations are consumed in very much larger quantities than any of the other cinchona salts formed by inorganic acids. That the cinchona and acetanilid groups of antipyretics, in common with the organic and inorganic antiseptics already briefly discussed, act largely, if not altogether, in virtue of their heavy molecular weight, there can be little doubt. From this it must not be assumed, however, that every therapeutic agent that is possessed of a heavy molecular weight is either an antiseptic or a febrifuge; for the sulphate of strychnine and of morphine have almost as high a molecular weight as that of the cinchona sulphates, yet the action of these two classes of agents is altogether different. This is largely due to the fact that the former,

in virtue of their intense elective affinity for the nervous system, limit their depressant action in maximum doses, on that tissue, while the latter having a more diffuse trend of action, exert their influence on the neuromuscular system.

Several facts stand out very clearly in this brief review, viz: that all antiseptics are nonnitrogenous compounds, the organic group of which contains a moderate quantivalence of carbon, possesses no elective affinity for the nervous system, and has a general influence on the body; (examples—mercury chloride cor., acid benzoic, etc.); that organic antipyretics have a composition and a general action similar to those of the organic antiseptics (examples—sodium salicylate, salicin, etc.); that nitrogenous organic compounds with only a moderate quantivalence of carbon produce antipyraxis in virtue of their central action on the nervous system (examples—acetanilid, antipyrin, etc.); and that nitrogenous substances with a large quantivalence of carbon exert both a central and peripheral depressant or antipyretic effect (examples—quinine, cinchonine, etc.).

The ultimate action of antiseptics and antipyretics is, therefore, reduced to a mechanical basis, but a mechanical feature is a common characteristic in the action of many, if not of all, drugs. For example, all the important cathartics wield their influence in a mechanical way, not by depressing, but by stimulating alimentary peristalsis and secretion. Sodium phosphate and sulphate, potassium tartrate, magnesium carbonate and sulphate, by reason of their slow diffusibility, difficult absorption and heavy molecular weight, possess the mechanical power of enhancing the function of the alimentary canal. Other groups of remedies have a similar action.

In conclusion, it follows that antiseptics and antipyretics have the same fundamental action, that the primary function of the former is not that of destroying microorganisms, although this may occur incidentally, nor is it the direct office of the latter to reduce fever, but that they both, like cold, temporarily depress unduly ac-

celerated molecular activity of the body, which is the common and interchangeable property of irritation, inflammation and pyresis, until nature is given time and opportunity to reassert herself and restore order and harmony in the perturbed area. The sole object is the reinforcement of

that the principles of antiseptis and antipyresis, as well as all other therapeutic principles, rest on sound physiology and pathology. It is very unfortunate for scientific medicine that at present there exists a tendency to belittle the remedial powers of our materia medica, to ignore the import-

ance of our vast store of valuable therapeutic knowledge which has been gained by clinical experience, and to lure the profession into following unsafe and whimsical idols. Let us not rashly be led into the belief that the fathers of medicine labored in vain. They had an instinctive vision that in the wonderful influence which these agents possess over vital processes, lie hidden potentialities which will appear as colossal magnitudes, when compared with what we already know of their action.

As evidence of this prevision, it may be said that modern pharmacology has opened new worlds for research, and agents which have been viewed with scorn and contempt, now loom up into resources of untold power. The recent investigation of Meltzer into the anesthetic property of common magnesium sulphate is an example of this, but Meltzer has not touched more than a fractional portion of the diversified value of this drug; and that which is true of this magnesium salt will be found true of many hundreds of additional members of our medical armamentarium, when rightly investigated.

[Upon page 15, Editorial Department of this issue, will be found a brief outline of Dr. Mays' proposed work on Therapeutics, which promises to open up new fields for investigation and to aid in the establishment of our therapeutics on a firm scientific basis. Look up the above-mentioned editorial and read it carefully.—ED.]



DR. THOMAS J. MAYS

A clinical therapist whose writings have rendered great practical service to Medicine. Dr. Mays is now preparing an important work on therapeutics.

natural processes, and the therapist who, with all sorts of chimerical devices and artificial contrivances, assumes to amend and rectify physiologic function, misses his vocation, and will sooner or later awake to a harvest of regrets. It must be realized



# AN "ALKALOIDIST" IN THE PHILIPPINES

How a far-off reader of *Clinical Medicine* looks forward to its coming, and helps to spread its message; with a description of that strange city of the orient—Manila

By THOMAS E. MOSS, M. D., Manila, Philippine Islands

Surgeon in the Philippine Constabulary

I ALWAYS look forward to the arrival of my number of *CLINICAL MEDICINE* with great anticipation, though it is sometimes sixty days old when I get it. I never fail to find something of helpfulness and interest in every number.

Most of the physicians over here are not in sympathy with the *CLINIC*. They look upon it as a "scheme," a source of wealth and a business proposition. I tell them that they are exactly right, only that they have not gone deeply enough into the matter—that if they would look at it with unprejudiced eyes they would find that the "scheme" is to help mankind by educating the physician; it is the "source of wealth" not to the editors of the journal alone, but for the most part to the physician who has brains and common-sense enough to follow its teachings and to use the "active principles;" while, as to the "business proposition," I do not think that the average physician has any right to talk, for I do not know of a class of men, taken as a whole, who know less about business; so if the *CLINIC* is a business affair, they should get in line and learn something about the method whereby it has made itself almost indispensable to more than thirty thousand physicians.

## *An Argument With a Doubter*

I had an argument with a very noted physician here the other day in regard to aconitine; he said that he had tried it "once" and could get no results. I asked him who made the medicine. He said that he "didn't know." I told him that we did not claim that "any old" sample of aconitine made by just "anybody" and used indiscriminately, would do anything; but that we know that certain alkaloids

made by dependable people would do certain things, and that when given right a definite amount would do a definite amount of work.

This physician also wanted to know why we claimed that calcium sulphide was indicated in certain forms of skin disease? I told him for the simple reason that sulphur in almost any form was death to most forms of parasites, and that in this form it was eliminated by the skin to a great extent.

## *The Ever-Present Skin Diseases*

I reckon that I have had more success with calcium sulphide and sulphocarbolate of zinc since I have been over here than with all the other medicines put together, for we have more skin and bowel disease than any other; in fact, we have so many skin diseases that we get tired of looking up the right name for them and class about a dozen different ones under the head of "Dhobie itch." The thing that has struck me most forcibly is the fact that since I have been over here and studied the tropical diseases I have seen some cases that resemble so closely those that I have had in "the States" that I believe that they are identically the same, only that they are not recognized. A case that I have in mind just at present is one of mycetoma; this was seen by me in a negro back in Kentucky where I used to live. I amputated the foot and diagnosed the case as a tubercular lesion, but since coming over here and seeing the disease known as mycetoma, I am satisfied that my case and these are the same.

I am sending you a picture of my parlor as it looked when I was in the Cagayan Valley. The people portrayed in the scene

are my wife, her sister and my little daughter; also, one of my servants is seen holding up my collection of wild-boar tusks. Upon the walls of the room can be seen a few weapons. They are a part of my collection that I hope some day to bring back to the States. I am also sending you a picture of myself.

I am no longer in the Cagayan Valley. I was ordered down here two months ago

some not more than ten or fifteen feet across, with the second story of the old-fashioned Spanish houses projecting out over them.,

On the ground floor of these houses, looking out upon the street, are large windows barred with steel and iron. In these windows can be seen, seated, the Spanish *senorita* (Spanish girl) talking to people on the outside. No Spanish or high-class Filipino girl is allowed to go anywhere

by herself. The mother or father always accompanies her, but she may sit in these windows and talk to anyone she pleases. I have noticed the rare beauty of some of them; they are of a type of beauty peculiar to the Spanish race. They have fine features and, with their dark eyes, long lashes and jet black hair, certainly look lovely. Some of them have an



DR. MOSS'S COLLECTION

The most important part being the wife, the sister and the little one—but all good to have!

to Manila to take a station. I am in charge of the hospital over at the Con-stabulary School, and am at present assisting the chief of the medical division.

### *Manila and its Walled City*

I do not think that I shall stay here in Manila very long for I like the provinces better, as I like an open-air life and can not stand confinement. This city of Manila, though, is certainly one of the most picturesque places on earth. One part of it is what is known as the "Walled City." The Walled City is that part of Manila which the Spaniards fortified years ago. The ground covered by this Walled City is about a mile in extent, I should say about a mile in area. This is a typical Spanish city; here can be seen the small, narrow streets,

olive tint to their complexions and some have very fair skins, but to all is given that shade of swarthinness that seems to be indelibly stamped in their features, no matter how fair they may appear.

### *A Description of the Wall*

All around the Walled City runs a high wall protected by a moat, fifty or sixty feet wide; this wall was built for protection against the people of the surrounding country, who were in the old days eternally rising up in revolt. This wall is about thirty feet wide at the top and about forty feet high; it is built of stone, and upon the top one can see, to this day, cannon that were used for defense. Running all through this wall are passage-ways and rooms; some were used for storing ammunition,

some for the soldiers to sleep in, some for the guards while off duty, and yet others were used as dungeons where prisoners were put to wear their lives away, never seeing the light of day and with scarcely enough food thrown to them to keep alive the feeble spark of life—sometimes with the roar of battle going on above them.

Some of the cannon have been taken off this wall and placed in other parts of the city and in the parks for ornaments, but the majority are still on the wall where sightseers go to look at them; they are for that, nothing more, for while the Spaniards did not want the insurrectos to get close to them, the Americans found their greatest difficulty was to get them to come close enough.

The largest part of Manila is that which is outside of the Walled City; naturally so, for only a limited number of houses could be put inside of the enclosure, and as they were built some of them, hundreds of years ago, they are not of modern architecture, though in the other part of Manila one may see palaces. There are some of the most beautiful houses and grounds in Manila that can be imagined. Of course they are beautiful. Wouldn't you think that a house would look beautiful, when set right in the middle of a nursery of flowering shrubs and flowers of every description? I wish that "you-all" were over here to enjoy it. The flowers over here bloom all the year round. They only drop their blooms in order that other flowers of more surpassing beauty may take their place.

#### *The Luneta a Beautiful Place*

The finest thing over here in this city, to my mind, is the Luneta, which is a large lawn covering about fifteen acres of ground

and situated right on the shore of the bay. The largest boulevard in the city runs right by it and constitutes one of the drives that traverse it. There are walks and drives all through it, with grassy swards between. A large bandstand is situated in the center of the Luneta where the Constabulary band plays every other evening



DR. THOMAS E. MOSS

An American surgeon, who has been rapidly promoted in the Philippine Constabulary service. Many of his experiences, all interesting and some exciting, have been recorded in *CLINICAL MEDICINE*.

when the weather permits. This is one of the finest bands in the world. It contains eighty pieces, all of silver, and it certainly makes sweet music. The whole of the grounds is covered with grass that grows the whole year round. It is kept trimmed and always looks green and cool.

The Luneta is where the aristocracy of Manila go in the cool of the evening to

walk and drive; you see it is too hot to go anywhere during the day, but when evening comes, with the cool breeze blowing in from the ocean, it is very pleasant.

It is a wonderful sight to see the beautiful women of all nationalities, dressed in splendid costumes, driving by in sparkling equipages drawn by the high-spirited little ponies. These ponies in themselves are something to look at, for they are the gamest little horses in the world and seem just as proud as the people. Sitting here

in this place, with the atmosphere heavily laden with the perfume of millions of flowers, watching this changing scene, there seems to steal over one that indescribable something which at dusk, in the Orient, seems to fill the land with a sweetness that lulls the brain and instills into the soul a sense of peace and rest. I have often sat here thus, looking out at the great ships in the bay, and always my thoughts turn to the dear land across the sea, the finest, after all, on earth.

## THE AMERICAN SCHOOL OF MEDICINE AT BEIRUT

An American medical college in Syria which is doing splendid educational work, while maintaining the ideals of the noblest manhood. No therapeutic nihilism here!

By Walter B. Adams, M. D., Beirut, Syria

*Professor of Materia Medica and Therapeutics*

IN 1867 was there a school of medicine in America with a four-years' graded course of study of nine months each year? Is there one today? Scant eight months is the year of most of the best schools. Yet forty years ago, when the medical department of the Syrian Protestant College was opened, it began with a course of thirty-six months of teaching graded from year to year. Such were the high ideals at the start, and since that time there has been a constant endeavor to keep in the front rank of medical education. So far as paper and ink will show this I wish to demonstrate it; but one should come out here—as have Senn and Weir Mitchell and Keen and Bland-Sutton and others eminent in our profession—and see for one's self and bear witness.

Incorporated by the laws of New York, a department of the University of the State of New York, this medical school is also recognized by the Turkish government as a department of the Imperial University at Constantinople. It is the medical department of the Syrian Protestant College, which, in the Levant, is nearly always

spoken of as "the American University." Last year the enrollment of the college in all of its seven departments was 878; of these 102 were in the school of medicine. The board of trustees in New York consists of Morris K. Jesup, president; D. Stuart Dodge, secretary and treasurer; Samuel Dennis, Alexander Maitland, V. Everit Macy, C. C. Cuyler, Arthur C. James, M. Hartley Dodge, and Wm. M. Kingsley. The university staff consists of the president, fifteen professors, eight adjunct-professors, nine administrative officers, and forty instructors.

### *The Medical Faculty*

The faculty of medicine comprises the president, Rev. H. S. Bliss, D. D.; Rev. George E. Post, M. D., D. D. S., LL. D., surgery; Harris Graham, B. A., M. D., practice of medicine, pathology, bacteriology; Walter Booth Adams, M. A., M. D., materia medica, therapeutics, dermatology; Rev. Charles A. Webster, B. A., M. D., anatomy, diseases of the eye and ear; Franklin T. Moore, M. A., M. D., hygiene, obstetrics, gynecology; James A. Patch,



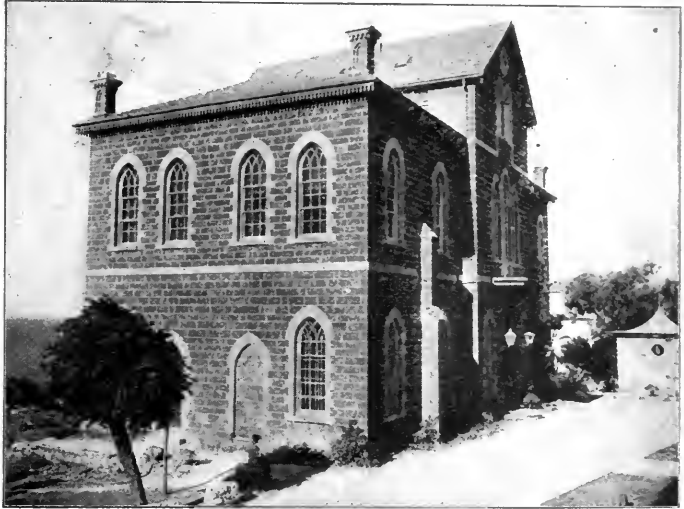
S. B., chemistry; Harry G. Dorman, B. A., M. D., physiology, general pathology, pediatrics; T. C. Ladakis, Phar. M., analytical chemistry; Nimeh K. Nucho, M. D., normal and morbid histology; Ancel St. John, Ph. B., demonstrator of the x-ray; Nikola K. Maluf, M. D., demonstrator of anatomy and prosector of surgery; Nejib Y. Yunis, M. D., clinical assistant in surgery; Nikola C. Rubeiz, M. D., clinical assistant in internal medicine.

During the first twenty-five years of the history of the college the instruction was given in the Arabic language, and it is impossible to realize the immense labor thrown on the faculty to prepare the necessary textbooks, both academic and medical, in that language, and 'meet all the other demands of their chairs, or "settees," as Dr. O. W. Holmes once spoke of his compound chair. In 1882, however, the language of instruction was changed to English in the whole institution, and a new era began.

The curriculum has been steadily enlarged and enriched. Studies formerly in the course, such as botany, zoology and inorganic chemistry have been taken out and placed in the list of requirements for entrance. In addition, candidates must be able to read, write and speak English, and either French or Turkish, as the student may elect, with sufficient readiness and correctness to enable them to pursue the course of study. Political and physical geography, Walker's "Physiology and Hygiene" or equivalent, arithmetic, algebra through quadratics, plane geometry and physics are the other requirements. The B. A. degree admits without examination. The examinations are written—and rigid. No conditions are allowed except in French.

Our method of instruction is based largely upon recitations from the best and latest

editions of textbooks, thus requiring constant application and study. A student coming to us from another school once said, "At my former school one might learn if he chose, but here he must learn or get out." These recitations, however, are supplemented by lectures, demonstrations, clinical lectures, and oral and written quizzes.



The Medical Building of the Medical Department of the Syrian Protestant College at Beirut, Syria.

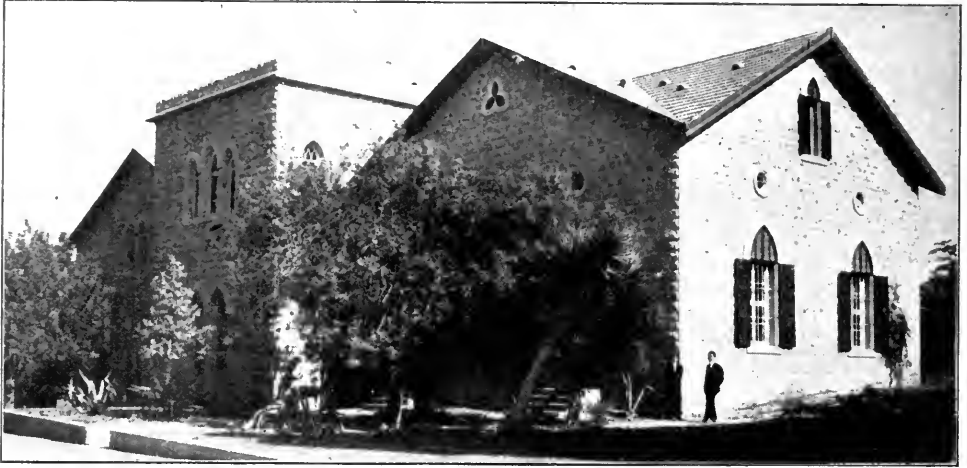
Practical demonstration and close contact with the subject under consideration is always to the front, and our men are required to touch and taste, look and listen, smell and feel wherever opportunity offers. Great prominence is given to laboratory work in the first two years, and to clinical work and assistance in the later years of the course.

A clearer idea may be given if an outline of the work is presented. The freshmen have organic chemistry five hours a week for a semester, and spend four hours each week for the nine months in the analytical laboratory, analysing metals, acids, alkaloids, urine and calculi. Five recitations in anatomy, studying bones, joints, ligaments and muscles from Gray, and a full course of work in the "anthropotomic laboratory," as Dr. Holmes euphemized his workshop, are required. Five hours a week of histology—four at the microscope

and one of recitations—all the year give a good basis for understanding physiology, which is taken up in the second semester, five hours a week, and completed in the sophomore year.

During the sophomore year the students have much work in the physiological laboratory, where they also make practical study

hospital work in surgery and pathology. They have five recitations and two polyclinics a week in each branch. A most valuable feature of both courses is the ward instruction, bandaging and dressing in one, and case histories, which are read before the professor and class and are subject to searching questioning and criticism from



The Chemical Laboratory of the Medical Department of the Syrian Protestant College at Beirut.

of the more important drugs in their physiological action. Frogs, street dogs—of which Beirut has a plentiful supply—and a guinea-pig farm furnish the material. Anatomy is again given five recitations weekly, and topical and surgical anatomy are specialized. Another full course is given in practical work “up stairs.” They study their future chief tools, materia medica, pharmacology and prescription writing, five hours a week. Hygiene is a course of lectures after the old-fashioned methods, for no text is printed that will cover both our idea of hygiene and the European conception of the term. Three of these lectures a week, and then four hours of general pathology fill up their schedule. The latter course is valuable as an excellent introduction to the practical and the more extended study of the last two years.

#### *The Advanced College Work*

In the junior and senior years the two classes meet together in their recitation and

all sides, in the other. When the diagnosis does not satisfy the professor, a “commission” is appointed to go to the bottom of the case and present another phase and diagnosis. Bacteriology comes at the end of the junior year and fits them for these case-takings in senior year. Diseases of the eye and ear are taught three hours weekly one semester. and most valuable instruction is given in the overwhelmingly large polyclinic and in the operating room, where towards the end of the senior year selected cases are given to students to operate on themselves.

Obstetrics and gynecology run through the junior year, three hours a week, supplemented by clinical lectures, two polyclinics a week in small sections, and attendance at operations. The obstetrical hospital is a novelty in this land, and yet the students last year saw Dr. Moore assist twelve babies to enter the Imperial Ottoman Empire without passports! In dermatology the juniors have class-room instruction three

times a week and two polyclinics where they see a large assortment of cases for two years. In connection with this department they have practical experience in using the x-rays and Finsen's apparatus.

Senior year completes the work in surgery and pathology, as has been intimated. The pediatrics course is a most valuable one in this land of such great infant mortality and ignorance of how to care for the little ones. The polyclinic and hospital wards give abundant opportunity for practical work in this branch.

In the last year they also have a three hours a week course in therapeutics. It is designed to supplement the work in materia medica and to teach the use of medicines, not from the standpoint of the frog and guinea-pig, but from that of the sick human being, and to give facility and versatility in prescribing. The professor is not a nihilist. Before this course was established one of our students was heard to say, "When I got through studying materia medica I had great faith in drugs, so much that I almost believed that if I should go into the cemetery of my village in the Lebanon and should sprinkle quinine on the graves, those who had died of malaria would rise up! But now that I have studied pathology a year I realize that all drugs are useless or worse than useless." It was to prevent such a loss of faith that the faculty established this course. If any reader of this does not know the textbook we use, Burney Yeo's "Clinical Therapeutics," he should get a copy.

#### *The Equipment of the College*

A word in regard to our equipment. The museums of anatomy, histology, normal and

morbid, ophthalmology, surgery and dermatology are fine, and are steadily increasing. The wax models of eye and skin diseases are large in number and true to life—or rather to disease! A still greater number and variety of cases, however, are seen at the clinics. The surgical museum contains an almost unsurpassed collection of calculi, vesical, urethral, nephritic and ureteral.

The chemical laboratory is large and is well supplied with water, gas and all other requisites. A more beautiful and better lighted histology and general pathology laboratory would be hard to find anywhere, and the same may be said of the lighting and ventilation of the "anthropotomic laboratory." The physiological laboratory is about to be enlarged to meet the pressing demand of more students and new apparatus. The bacteriology laboratory is finely equipped.



The Last Graduating Class with Professor Graham (in Apron)

The hospital facilities are furnished by two institutions: the Johanniter Hospital, owned and supported by the noble German order of the Knights of St. John, of which the Crown Prince is now the head, is devoted to the medical and surgical cases. The medical professors are the sole attendants and the deaconesses of Kaiserswerth

are the nurses. Women's diseases, obstetrics and children's diseases are cared for in the Maria De Witt Jesup Hospitals, the separate pavilions of which are on property adjoining the university campus. Here also in a year separate pavilions for the diseases of the eye and the skin will be opened. In connection with these Ameri-

with us, and with the shorter course in the homeland, return armed with their American parchment before their former classmates have completed their course. Few of the men who are turned back a class repeat the year. Nearly all go to America.

We owe much to our great and good friend Theodore Roosevelt, who as a lad

spent some weeks here in Beirut and is otherwise interested in our work. He sent a personal letter to the Sultan asking for us the same privileges in the matter of local examinations that the French demanded with a fleet of war ships for the Jesuit College here, and he got it. Accordingly, three commissioners from the Imperial Medical School at Constantinople—men of fine ability and high medical attainments—are sent at the close



The Imperial Examining Commission and the Medical Faculty

can pavilions is a training school for nurses, with a graduate of the New York Post-graduate Hospital as its superintendent.

Our system of examination is a very thorough one. At the completion of each subject a written examination is held, and the mark for it is added to the term average of the daily marks in that subject and the result divided by two. If the student thus attains a grade of 60 percent he may come up before the medical faculty for his oral examination. Passing all his subjects of the first two years, he comes up for his first two "doctorates" before the mixed jury of the Imperial Commission and the faculty. The third and fourth "doctorates" are taken at the end of the senior year. The low standard of some of our medical schools in America makes trouble for us. Repeatedly when men have failed and failed miserably with us they go to America, pass into the year they are debarred from

of each college year. They sit with the faculty and in French or Turkish examine our students of medicine and pharmacy. Those who pass this joint examination are licensed to practise in the Ottoman Empire. The president of the Commission at Commencement administers the Hippocratic oath and gives kindly counsel to the young doctors and pharmacists. The full dress uniforms of the commissioners, who all have military rank, the presence of the Governor General or his representative, the commander of the garrison, the military band which plays the Imperial March and "America" after the assent to the oath, and the bright colors of the gowns and hoods of the faculty make a brilliant and picturesque setting for the commencement exercises.

One may wonder whence these young men come and whither they scatter after they get the coveted parchments. Read the

second chapter of Acts and you will get some idea. Syria, Palestine, Asia Minor, Egypt, Persia, the "isles of the sea," Macedonia, Bulgaria, are the chief countries from which we draw our constituency. We also have a sprinkling from other European countries and from far-away America. As one would expect there is a great mixture of races—Syrians, Armenians, Egyptians, Greeks, Bulgarians, Persians and Jews are the principal races. There are many religions represented, too: Christians, Protestants, Greek Orthodox, Greek Catholics (called "Quatelines"), Maronites and Roman Catholics, Armenian Orthodox and Catholics, Jacobites and Copts; Moslems of both sects, and Druses, and Babites, and Jews;

all come and all are welcome to this Christian and missionary university. Here they cannot remain without hearing of the better way and of the Great Physician. And we trust many follow in His footsteps.

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[A very important part of the story Prof. Adams has left out, and that is that he himself is a regular reader and enthusiastic user of the active-principle remedies, that he talks and teaches the active-principle idea to his class, and uses it in his public and private practice, and that through his influence many of the graduates of this splendid school are readers of CLINICAL MEDICINE who put its preaching into practice.—ED.]

## FOURTEEN YEARS WITH THE ACTIVE PRINCIPLES

Commencing with the making of tinctures, extracts and pills in a drug-store, followed by interest in the active principles aroused by reading The Alkaloidal Clinic as a physician, and why this interest has grown

By R. J. SMITH, M. D., Schenectady, New York

TIME has cast a merciful veil over my first beginnings in practice and of my patients in that far-off (though comparatively near) period. I have faint recollections of few. They were few in number, too, no doubt. Perhaps the assistance I received through intimate association with my earnest, studious perceptor and other members of a broad, unselfish profession in one of the most beautiful of Canadian cities carried me over that fearful time, when our recent graduate cuts loose from all other support except his own initiative, with less outward disturbance than falls to the lot of many.

### *The Drugstore Apprenticeship and what it Taught*

My first step along the line of medical interest apprenticed me to the drug business, where for four years my days of eighteen hours were filled with the making of tinctures and solutions, liquors and extracts, pills

and powders and the compounding of numberless prescriptions of all kinds and descriptions. Perhaps this experience added to that gained in five years of medical study, in which the study of therapeutics held a low place, led me to an early interest in the active principles. Certain it is, that the many instances of uncertainties, and often of absolute inertness of the usual drugstore preparations of that date, developed in me a desire for something more dependable, more uniform, more accurate. The active principles appealed to me as such. Looking backward, it seems to me now that my belief in their activity and dependability grew very slowly. Whence came the first literature on dosimetry I do not now recall, but distinctly I remember the first ALKALOIDAL CLINIC that came into my hands and the interest its teaching aroused. Though only a pamphlet of a few pages, it contained a great deal of meat. The nine-vial case accompanying it was a constant

pocket companion, although its contents were for a year little used. My recollection is that the "life-saver" glonoin first aroused my active interest. Aconitine in the fevers of childhood, then hyoscyamine and strychnine arsenate in spasmodic pains, and appendiceal colic, veratrine in acute congestions and calcium sulphide in "boils" forced me gradually into line, and within three years active principles filled the bulk of my prescriptions. I dispensed a good many, but prescribed more. A willing druggist placed a large stock of the Abbott goods at my disposal and increased that stock as the demands of my practice grew. I found, however, that dispensing the medicine directly to my patients gave more satisfaction both to my patients and myself, gave better results, and my success was greater in these cases.

#### *The Handicap of the Dispensing Physician*

The dispensing practitioner has a big handicap over his prescribing brother in acute cases and in emergencies. It is a pleasure to have ready to dispense remedies at hand as we have in the active principles, so compact, easily assimilated, readily dissolved and quickly acting. The patient in my experience appreciates the efforts of his physician to give him relief, and is always ready to pay cash for such service. There is also added to the certain action of the remedy a suggestive force altogether lacking in the druggist-dispensed preparation. However, the dispensing question must be settled by each, for himself, and it is not possible to lay down a law to fit every case. A certain amount of prescribing must be done if the best needs of our patient are considered.

Gradually the "arms of precision" wormed their way into my interest and I learned to depend on their certainty. They were used more and more increasingly until at the present time I use them almost exclusively. The granules of the Abbott make have been my choice for fourteen years. During that time they have proved absolutely reliable and entirely satisfactory. Often they have been blamed for poor results, for inactivity,

when detailed search has shown me my error, and usually that error has proved to be too slack elimination. It took time to grasp the fact that absorption and elimination of our medicament depends on the condition of the stomach and bowels, the liver and kidneys, and the skin. It became a routine duty to study every case from this aspect, and I invariably found my lack of result was due to torpidity of the emunctories.

#### *The "Clean-Out, Clean-Up and Keep-Clean"*

##### *Idea*

Now my first prescription in every case is for calomel, podophyllin or other chologog, followed by a generous flushing of the entire canal with the pleasant and efficient saline laxative. "The clean-out, clean-up and keep-clean principle" is most important. If for no other one thing, credit must be given unstintedly to Dr. Abbott for so constantly and everlastingly forcing this fact upon us. It is one of the simple common-sense things to do and the one thing practitioners so often neglect and take for granted. On the neatness and dispatch with which this principle is carried out depends the comfort and quick convalescence of our patient and, better, the prevention of disease itself. With the organs of elimination in normal activity, disease is held at bay. The opsonic index is then at its highest, the leucocytes are then most active, the red cells are their reddest and nerve impulses flow freest.

In addition, credit is also deserved for the growth of the intestinal-antisepsis idea. Dr. Abbott did not originate this principle. Intestinal antiseptics were used before his day and recommended by the old practitioners in certain cases. But it is not alone having knowledge of the good of a certain measure that leads us to its adoption. Reiteration of a thing is necessary to impress it on our fickle memory. Clinical experience developed its importance, and the reiteration of this good thing forced its importance on us, and it is now a recognized fact.

The alkaloidal idea did not originate with Dr. Abbott. Some practitioners seem to

accuse us of such belief. He early in practice recognized the benefit to be derived from pure, active, constant medicaments and against the most determined opposition has forced truth home. But years before him Burggraeve of Ghent had gained a numerous following along the line of dosimetric thought. Some alkaloids were known before Burggraeve. He but grasped the opportunity presented and formulated rules of procedure evolved from his clinical experience, such as "to acute diseases oppose acute treatment, to chronic diseases, chronic treatment;" also "when it is desired to obtain the effect of a medicament, it must be given to the point when that effect is obtained." This we condense into "give to effect, irrespective of the dose." Knowing nothing of the quantity that constitutes a dose in individuals, Burggraeve gave small quantities frequently repeated until the effect was obtained. "Small doses facilitate the absorption of the medicine and make it certain that the needed quantity shall not be exceeded."

Prof. Laura, Turin, said twenty-five years ago: "I am profoundly and seriously convinced that this new dosimetric method is a grand progress in the science and art of medicine, it restores to the physician an abiding faith in the curative powers of his art, while it spares him the dangers of an excessive treatment and that it renders to suffering humanity services much superior to those of ordinary medicine. The dosimetric method contains the germ of a perfection which time and science will develop from year to year."

Judge of the truth of this statement by the progress of this therapy during the past dozen years in these United States. Such progress is epitomized in the remarkable development of THE ALKALOIDAL CLINIC, a small, though compact, little pamphlet that first claimed our support, into the

magnificent, practical monthly now given us by the enthusiastic, hard-working, energetic editor and his able staff.

#### *Advantages of Active-Principle Therapy*

The therapy of the active principles differs often greatly from that of the cruder tinctures and fluid extracts. When the medicinal activity of a drug is represented by one active principle, as aconitine in aconite root, the active principle occupies the same



DR. R. J. SMITH  
An Enthusiastic Follower of CLINIC Teachings.

field of action as the parent drug, but in a more refined sense, more definite, safer. It is when the plant contains two or more active principles that a separate individual study of each must be undertaken to outline carefully the field of therapeutic action of each active principle. Such efficient study has produced a wealth of material, not yet properly sifted, perhaps, but containing many definite, clinically proved

facts. Many new remedies have been isolated, many are in process of isolation, leaving still many instances of plants containing perhaps remarkable therapeutic properties now unguessed at. Many plants have remedial actions, but their active principles are still unknown.

That the future will give these to us and so refine the dosimetric method that it will be lifted to the dignity of a science and restore to the profession that place rightfully ours, ours by right of the material good to mankind done in the past, doing now and to be increasingly done in the future, cannot be doubted. The millennium, when all will obey the laws of health and become healthy, when doctors will find their profession outgrown, is altogether chimerical. The poor in all probability

will always be with us and our services in greater demand.

The aim of all students in medicine should be the perfection of those means by which disease processes may be alleviated, among which physical agents hold an important place, but not to the exclusion of medical agents by any means. Exactness in therapeutic agents will bring an exact therapy and will give exact results. To this end the development of the active-principle idea is a grand step forward along the line of positive advance in the rationalization of therapeutics, with a glorious future before it, giving us more efficient arms than we now possess, even in these latter days of medical confidence of a willing public, and dealing the deathblow to quackery in all its forms.

## ACTIVE-PRINCIPLE THERAPY AND SCARLET-FEVER

Advantages of the small, repeated-dose idea, and of the administration of the active principles, as especially illustrated in the treatment of scarlet-fever

By W. F. RADUE, M. D., Union Hill, New Jersey

Author of "Dosimetric Treatment of Children's Diseases"

IN looking back over the battle waged by our Dr. Abbott and his colleagues for a more modern and up-to-date method of treating disease, and while considering the many arguments of our critics as to the "whys and wherefores" of the new idea, and the wonderful success obtained by perseverance and hard work, I can only say, with the rest of our brethren, "They have fought a good fight," and, thank God, the battle is won. The tide is getting stronger every day in favor of this most modern and only successful way of treating the diseases of mankind—the alkaloidal, or dosimetric, method.

### *Advantages of the Small Repeated Dose*

As I have always said, we can not treat all diseases by alkaloids alone; but we can treat all diseases by small and oft-repeated

doses of medicine, or by the dosimetric method. In that way we can most successfully treat the diseases in hand. By giving a small dose of medicine every fifteen minutes to half hour, until the desired effect is obtained, one can then reduce the dose according to the circumstances of the case. Not alone will this method produce better results, but the remedies themselves are more pleasant and we avoid the large and nauseating doses of our fathers. This is especially important when one has to deal with children and sensitive patients; and not alone are the results better, but from a financial viewpoint it is desirable; you will notice an increase in your practice and beside this, you get your patients to come to you for refills, for which you can charge a reasonable fee, thereby making the profit for yourself instead of letting the



druggist, who as a rule has got no use for you, get that which rightfully belongs to the doctor.

I am sorry to say that the honesty of many druggists is questionable. Proof is plentiful that substitution has been practised to an alarming extent during the past few years. I earnestly recommend all physicians to dispense their own medicine, especially the granules, which are so readily given and nearly all soluble in water so that they may be given to the smallest of children. It will not take up any more time to dispense the granules than it takes to write a prescription, for which you may have to wait three or four hours before it comes back from the druggist. By giving your own medicine at once, the needs of the patient are immediately supplied when most required. I have often had patients tell me they had to wait a whole day before they got their medicine from the drugstore, but with me it happens no more.

I carry my drugstore with me in the shape of a No. 6 medicine case, which holds variety enough to treat anything and everything in sight. Just think what a delay of a few hours may mean in a serious case. Why, it may mean life or death. I take no more chances!

As to my treatment of scarlet-fever, I proceed as follows: For a five-year old child I start by giving a 1-6-grain granule of calomel every half hour until eight have been taken, these to be followed by saline laxative; or I sometimes give a 1-6-grain granule of podophyllin with every third dose of the calomel. After the bowels have moved I begin with the intestinal antiseptic (sulphocarbolates), giving one grain well diluted with water every hour or more. I double the above dose if this becomes necessary.

If the temperature is high, say  $103^{\circ}$  to  $104^{\circ}$  F., I put five granules of aconitine and five of 'dosimetric trinity in twenty-four teaspoonfuls of water and give a tea-

spoonful every half hour for six or eight doses, and then every hour until the temperature falls to  $101^{\circ}$  F. or less; after this I give it every one, two or three hours to keep it beyond the danger point. In some cases it is necessary to double the above dose before the desired results are secured, while in others, in addition to the above, it is well<sup>2</sup> to use the warm bath, gradually cooled from  $90^{\circ}$  to  $70^{\circ}$  F. or less,



DR. W. F. RADUE

Who has made notable contributions to alkalometric literature.

to bring down the temperature. This must be repeated as often as necessary until the desired results are accomplished. In many cases I find that the application of cloths wrung out of ice-water applied over the head and the glands of the neck helps to keep down the temperature; in many cases the cold to the neck will prevent involvement of the glands and prevent their supuration. If suppuration occurs, open at once and wash out with a 25-percent solution peroxide of hydrogen, dry and dress with a wet 2-percent boric-acid solution.

This will prevent infection and produce a rapid healing of the wound.

In some cases it is necessary to use some antiseptic powder or ointment to cause healing. In indurated glands, without suppuration, a 10-percent oleate of mercury ointment rubbed in the glands twice a day will cure or you may use a freshly made iodine ointment. Use as above described until cured.

#### *Calcium Sulphide Given to Saturation*

The internal medication consists of calcium sulphide given to saturation; when this is accomplished, reduce the dose, but give enough to keep the breath smelling of the sulphide until desquamation is well advanced, when you may reduce the dose or discontinue with it altogether. At this time I always anoint the whole body of the patient with borated vaseline, 6-percent, daily, after giving a warm bath to wash off the epithelial scales of the day previous. Be careful not to expose the patient to any drafts when you give a bath or the patient may get some serious complications.

For spraying the throat there is nothing better than the "menthol-compound" tablets (Abbott). Dissolve one or two in one-half glass of water; this solution is to be sprayed into the throat every hour. Older children can use it as a gargle.

If complications occur, such as diphtheria or croup, you must treat accordingly. Although these complications are of a very serious nature, timely treatment, pushed to full effect, will save many cases of diphtheria. Inject at once 5,000 units of antitoxin; Lederle's refined concentrated is my favorite. Repeat this in twelve hours if necessary. No two cases can be treated

alike. You will have to be the judge in every case. Spray the throat every half hour or hour with a solution containing 25 percent each of peroxide of hydrogen and listerine, and blow a powder consisting of equal parts of trypsin and sodium bicarbonate into the throat every hour or two. This will dissolve the membrane and clean the throat. In many cases in addition to the above treatment I now inject from 10 to 20 drops of nuclein under the skin, twice daily, and I earnestly urge its use, as it has saved for me many cases of a serious character. Do not forget to give good liquid nourishing food throughout the disease.

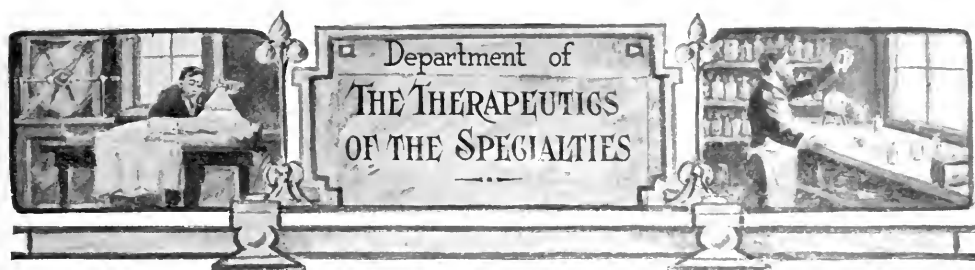
#### *The Renal Complications*

If renal complications occur give digitalin, apocynin and asparagin. Diuretin and potassium and sodium acetate are also excellent. Push to full effect, then reduce. As I treat all of my scarlet-fever patients now with dosimetric trinity from the start I seldom have any renal trouble; as the dosimetric has digitalin in it they get under its influence at once, thereby preventing renal complications in many cases.

In convalescence give triple arsenates with nuclein after meals, and quassin before meals. This is best given diluted, as it has a better effect in dilution.

With the foregoing treatment of scarlet-fever and its complications you can save the majority of cases. In closing I will say that if croup is a complication you must push the calcidin to its full limit, but as a complication of scarlet-fever croup is in nearly every case of a diphtheritic nature and must be treated as such. If necessary you may perform intubation or tracheotomy to save life.





## THREE INTERESTING CASES OF EPITHELIOMA

Illustrating three common types of skin cancer, giving their etiology, pathology and distinctive characteristics, and devoting special care to their treatment, both constitutional and local

By JOHN V. SHOEMAKER, M. D., LL. D., Philadelphia

Professor of Materia Medica, Therapeutics, Clinical Medicine and Diseases of the Skin in the Medico-Chirurgical College and Hospital, Philadelphia.

I PROPOSE reporting to the readers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE three patients suffering from epithelioma, each having a different variety of the disease.

### *A Case of Papillary Epithelioma*

Patient No. 1. This patient, whose age is fifty-two years, nativity Germany, four months ago first noticed a papule the size of a small pea, appearing on the left lower lip at the mucocutaneous junction. A month later another papule developed near the left angle of the mouth. Both papules are fissured and covered slightly with exuberant granulations from which a thin sanious secretion issues. The portion of the lip ulcerated is infiltrated, and in appearance much thicker than the opposite half of the lip. The patient states that at times he feels a sharp shooting pain, but it is not so severe that it interferes with his sleep. The patient does not smoke nor can he remember any traumatism received to his lip. His general health otherwise is good.

This patient had, undoubtedly, papillary epithelioma, which generally begins as a wart-like formation, elevated above the adjacent cutaneous surface, and varies in size from that of a split-pea to that of a chestnut. In some rare instances it appears as a large lobular or spongy excrescence, de-

veloped during the ulcerative stage of one of the other varieties of the disease. The surface may remain moist or may become covered with masses of crusts and scales, and finally breaks down into an irregular, open and painful ulcer. In this patient the papilloma is situated superficially; hence the ulcer will remain superficial for a comparatively long time. In the majority of cases, however, it is imbedded in the subcutaneous connective tissue, the ulcerative and infiltrative processes extend widely and deeply, and the disease pursues a malignant course.

### *Superficial Epithelioma of the Nose*

Patient No. 2. In this man the lesion is situated on the nose, where it first appeared as a papule which he squeezed. He states that the spot was of a glistening, yellowish white in color and in size as large as a number twelve shot. After he had pressed it a thin yellowish secretion exuded which formed a thin brownish crust. The lesion showed no tendency to heal but in appearance was not unlike that of an ordinary abrasion.

The disease is of fifteen years' duration, during which time it gradually spread peripherally by added nodules, which are commonly known as cancrroid corpuscles, and are characteristic of this affection. They

can readily be picked out of the skin and when rubbed between the fingers crumble into small particles, which, when examined under the microscope, are found to consist of epithelial cells of various shapes and sizes.

The skin around the edges of the ulcer is infiltrated and of a very dark red color. The patient complains of very little pain. From the history of the onset, the chronic course and the irregular, superficial, sharply circumscribed ulcer with infiltrated perpendicular sides, we can safely diagnose this as



DR. JOHN V. SHOEMAKER

Who is not only a well-known medical teacher, but the distinguished author of Shoemaker's "Materia Medica and Therapeutics" and other books, and editor of The Medical Bulletin.

a superficial epithelioma. This variety of epithelioma usually manifests itself by the development in the upper layers of the skin of one or more small papules, as was the case in this patient.

#### *A Cancer of the Lower Lip*

Patient No. 3. This patient had a mole on the left lower lip which he thought became irritated due to the smoking of his pipe, two years ago. The mole at first became hard and painful, and the lip hard and swollen.

Later a few hard nodules developed, which had an inflammatory areola. The nodules increased in size and gradually coalesced, forming the present large irregular tumor of infiltration, involving the entire half of the lower lip. The surface of this mass is in a stage of ulceration, the base of which is covered with a thick yellowish secretion; the edges are everted, the surface bleeds easily when touched, and is the seat of sharp lancinating pains. The submaxillary glands are enlarged and hard.

In this case we have the typical deep-seated or infiltrated form of epithelioma arising from the mole. Generally this form of epithelioma begins with the formation of one or more large round nodules in the subcutaneous connective tissue. The lesions vary in size from that of a small shot to that of a bean, and are light red or purplish in color.

#### *The Seat of Epithelioma and its Differential Diagnosis*

Epithelioma is a disease of middle and advanced life. It is rarely found in patients under forty years old, and is most frequent between the fiftieth and sixtieth years. It is more common in men than in women, and is more frequently met with on the face and in the genital region. The conjunctiva, pharynx, larynx, nipple, labia, vagina, uterus, scrotum and penis may be attacked by any variety of epithelioma. The anus and rectum also are subject to the disease. Epithelioma has sometimes been observed upon the abdomen, the backs of the hands and upon the scalp. The diagnosis of epithelioma is easy in the advanced stages, but it might in the beginning of an attack be confounded with the lesions of syphilis, and lupus vulgaris, or with ordinary warts, simple condylomata or seborrhea sicca. The differential diagnosis is shown in the following tables:

##### EPITHELIOMA (Papule)

1. No history of infection
2. Evolution slow
3. Lancinating pain

##### SYPHILIS (Hard Chancre)

1. History of infection
2. Evolution rapid
3. No pain

## EPITHELIOMATOUS ULCER

1. History of heredity
2. Lesion single
3. No history of concomitant signs
4. Evolution slow
5. Edges of ulcer hard and indurated
6. Secretion of ulcer blood-streaked, viscid and scanty
7. Lancinating pain
8. Occurs late in life

## EPITHELIOMA

1. Occurs late in life
2. Lesion single
3. Lesion surrounded by zone of infiltration
4. Ulcer deep
5. Secretion blood-streaked, viscid
6. Course more rapid
7. Lancinating pain

## EPITHELIOMA (Papillary)

1. Lesion painful
2. Lesion usually single
3. No history of infection
4. No concomitant signs
5. Occurs in advanced age

## TERTIARY SYPHILITIC ULCER

1. History of chancre
2. Lesion multiple
3. History of concomitant signs
4. Evolution rapid
5. Edges of ulcer not indurated
6. Secretion of ulcer fetid, yellow and abundant

7. Pain, absent
8. Occurs at any age

## LUPUS VULGARIS

1. Occurs usually during childhood or early youth
2. Lesion multiple
3. Lesion surrounded by characteristic papules and nodules
4. Ulcer superficial
5. Secretion abundant yellow and puriform
6. Course very slow
7. Pain absent

## CONDYLOMATA

1. Lesion not painful
2. Lesion usually multiple
3. History of infection
4. Concomitant signs of syphilis
5. Usually occurs in youth or middle age

known as an unusual length of the inter-papillary processes which project down into the corium like the fingers of a glove. Later the blood-vessels become dilated, the deeper layers of the skin become infiltrated with serum, and the lymph-spaces crowded with wandering cells and lymphoid corpuscles. The projecting finger-like processes of the rete mucosum increase in size and divide into branches, which unite with each other to form a framework of epithelial tissue. The cells of which they are composed become pressed together and form compact masses of various shapes and sizes. In papillary epithelioma there appears to be a combination of papillary hypertrophy and epithelial proliferation. Finally, in all cases, the gradually increasing pressure of the epithelial cells interferes with the circulation. The small papillae and their arteries become obliterated and the larger vessels are lessened in caliber. Degeneration and ulceration soon appear and mark the beginning of the second stage of the disease. The patient's health is not much affected while the ulceration remains superficial, but when it extends to the deeper tissues the neighboring lymphatics soon become affected and through them the entire system becomes profoundly involved. The composition of the blood is altered and degenerative changes, with the production of toxic products, occur in various tissues. The alkalinity of the blood is decreased and the destruction of albumin is increased irrespective of the nature and amount of food consumed. Muscular tissue and parenchymatous organs undergo fatty degeneration

*The Etiology of Epithelioma*

The cause of epithelioma is unknown. Many theories have been brought forward but none have stood the test. In some cases, however, the disease seems to be due to long-continued pressure or other mechanical irritation such as the irritation of a broken tooth, contact with paraffin, the irritation of soot in the folds of the scrotum producing chimney-sweeper's cancer. Cases of cancer often occur in which no source of irritation or of traumatism can be discovered. Old

It is difficult and even impossible clinically, at times, to decide whether a new wart-like formation is the initial lesion of epithelioma or only an ordinary wart. The difficulty is increased by the fact that an apparently simple wart after the lapse of many years may undergo degenerative changes and become converted into an epithelioma. However, as a rule all such warts develop after the age of thirty years and should then be looked upon with suspicion and removed at once; especially should they be removed when they make their appearance upon the lip, nose or near any orifice of the body.

Sometimes in the early stages of epithelioma of the face there is a congestive, scaly condition which resembles seborrhea sicca. Seborrhea sicca is widespread and other portions of the body are involved at the same time, while epithelioma is limited in area, single and accompanied sooner or later by characteristic small waxy nodules, the so-called "cancroid corpuscles."

*The Pathology of Epithelioma*

Microscopically there appears to be an inward growth and continuous multiplication of epithelial cells of the rete mucosum. The inward growth and continuous multiplication of epithelial cells forms what is

scars, preexisting warts, nevi, and sebaceous cysts frequently undergo degeneration without any apparent cause and become the seat of epithelioma. A predisposition to this malady seems to exist in some families, and nearly 60 percent of the cases give a family history of cancer.

The more recent theory is that all cancers are of a parasitic origin. Many cases have been met with and reported which excited the suspicion that the disease was transmitted from one individual to another.

#### *Methods of Treatment*

The treatment largely depends upon the extent of the disease and upon the constitutional condition of the patient. The patient with the superficial epithelioma upon the nose needs constitutional treatment to build up his general state of health. A good nutritious diet is of all-importance in all these cases. Of course meat should be taken sparingly, but well-cooked and easily digestible vegetables, eggs, milk, and cooked fruits of all kinds may be freely taken.

#### *The Constitutional Treatment*

Next in importance to the diet in epithelioma should be the constitutional treatment. Among the many remedies that will act upon the secretions, the blood, and the skin cells are the preparations of iron, manganese, sulphur, mercury, iodine, arsenic, and cod-liver oil. In employing one or the other of these hematinics or blood tonics as well as alteratives, the secretions, blood and tissues are so modified or changed as to give better digestion, assimilation and nutrition to the general system, and the tissues involved are thus enabled to take upon themselves some reparative action.

At times arsenic, given as the trioxide in from 1-50 to 1-20 of a grain, alone or combined with sulphur or calcium sulphide, accomplish the very best results. Arsenic sulphide and iodide are valuable preparations. In other instances iron, alone or combined with manganese and arsenic (as iron arsenate) has systemically the most happy results as well as the most powerful local action in altering the intense malig-

nant action of the skin-cells. Mercury, iodine or codliver oil are in some cases remarkably efficacious, given either combined or alone, to tone up the system and modify the local destructive action of the tissues. In the first patient I ordered the following combination for its systemic action:

Strychninæ sulphatis...gr. 3-5

Liquoris acidi arsenosi...drs. 2

Acidi hydrochlorici diluti.oz. 1-2

Glyceriti pepsini, q. s. ad.ozs. 3

M. Sig.: One teaspoonful in a little water after each meal.

#### *The Local Treatment*

In addition to the necessary constitutional treatment just enumerated, local remedies are also imperative in each and every case: first, for the purpose of removing all malignant cells and tissues, and secondly, for the antiseptic action upon the diseased structures. In the first patient the involved parts have been thoroughly curetted, then pure phenol is being applied two and three times a week as an antiseptic and stimulant. In addition, galvanism or the x-ray may be employed two or three times a week for the stimulating, sedative as well as antiseptic action of either of these agents. As an after-treatment, the parts are covered once or twice a day with very finely powdered red cinchona bark, which is one of the best stimulating, astringent and antiseptic powders that can be used in epithelioma.

The other two patients described are not amenable to medicinal treatment alone; we must have both of them operated upon by having the malignant mass in each excised. After the operation, galvanism or the x-ray are productive of much good in producing a stimulating, sedative, and antiseptic action upon the diseased tissues. The galvanism or the x-ray properly applied are of much good for the action just named. Either of these agents, however, is not of much benefit without first the operation of excision. The systemic treatment that has been outlined must be given in each one of these cases also, continued after the operation and during the galvanism or x-ray treatment.

The prognosis varies with the age of the patient, the form, duration, and location of the disease, and the presence or absence of glandular involvement. The superficial variety, as in the first patient, when thoroughly removed, will heal and will not, as a rule recur. The deep-seated and the papillary forms, on the other hand, are always grave. In the second and third patients,

even after the disease has been thoroughly excised, and even with the application of the x-ray and galvanism, together with the systemic treatment, the disease is apt to recur within one or two years. Most cases of papillary epithelioma die within two years after the onset notwithstanding all the treatment, medical or surgical, that may be tried in the interval.

## A BRIEF ON PROSTATECTOMY

A defense of this operation, which is shown to have a large field of usefulness and to be desirable in a large percentage of cases; with the indications for its use and a description of the technic

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Professor of the Surgical Diseases of the Genitourinary Organs, and Syphilology, Medical Department, University of Illinois

THE prostate has now an established position as a legitimate operative field, which has been attained by a battle of nearly a quarter of a century with so-called conservatism. The profession in general is still woefully negligent of its duty in obstructive disease of the prostate. The organ had been for so long a *noli me tangere* that medical men were slow to disabuse themselves of prostatic fatalism.

It will probably be some years before the general practitioner and the laity will have learned that prostatic enlargement is not a necessary concomitant of old age, and an affliction which must be patiently borne with such relief or agony, according to circumstances, as the catheter may give. Cases of old men who have used the catheter with benefit for many years are still advanced as convincing arguments in favor of routine catheterism. Scarcely a layman of advanced age can even now be found who does not believe that prostatic disease is something which is not only incidental to, but well-nigh inseparable from, advancing years. If he has chanced to hear of the radical treatment of prostatic disease, he is imbued with the notion that operation is a most desperate remedy, and only to be employed as a last resource.

Should he consult his family physician upon this point, his fallacious ideas of the subject may still be confirmed.

### *Some Points to be Borne in Mind*

As I so often have said in my writings, the surgery of the prostate will never have a fair opportunity for development until the following points are understood:

1. Prostatic enlargement is not a necessary concomitant of senility, and is not due to senility *per se*, but to slowly operating conditions which do not result in obstruction of the vesical outlet sufficient to produce symptoms, in most cases, until advanced life. The symptomatology of prostatic enlargement is usually some years behind its pathology. The clinical history of the disease, as usually gleaned, is inaccurate, the practitioner taking as his starting-point the first symptoms which are sufficiently severe to drive the victim to the doctor.

Acute retention is frequently the first alarming symptom that is heeded. It would seem obvious that prostatic obstruction sufficiently marked to cause retention must have been slowly developing for years. *The retention is due, not to the prostatic overgrowth, per se, but to the overgrowth, plus spasm, congestion or actual inflammation.* The slowly

growing prostatic overgrowth plays a preparatory rôle and the "plus conditions" the active rôle in retention. I have repeatedly called attention to what I have termed these "plus conditions" in all forms of obstructive disease of the urinary way.

2. Prostatic obstruction, when it once begins, almost inevitably progresses to the point where it produces residual urine and possibly complete retention.

3. Catheter life lasts on the average only about five years. Infection of the bladder, ureter and kidney usually occurs sooner or later and destroys life after a variable period. If infection does not occur, the backward pressure upon the kidney produces degenerative renal changes which lessen the patient's power of resistance and invite a fatal result in any intercurrent disease, especially if infectious.

4. The foregoing being established, the necessity of surgical intervention is proved and the time at which the operation should be done alone remains to be decided. If the prostatique is to enjoy the advantages offered individuals suffering with other diseases amenable to surgery, operation should be performed immediately upon the development of annoying and progressive symptoms, due deference being paid to possible congestive and inflammatory affections of the organ amenable to non-radical local and general treatment. I make this qualification with the proviso that it should be understood that obstinate inflammatory enlargement and congestive hyperplasia of the prostate at about middle life or beyond it is more than likely to result in true prostatic enlargement later on.

#### *Advantages of Early Operation*

The earlier the operation, the fewer obstacles to its performance. Many cases in which, if the operation be performed early, enucleation of the adenomatous growths is readily performed, will, if allowed to progress, undergo changes which make the operation difficult. I believe that, in a majority of cases, the difficulty is primarily distinctly glandular, beginning as adenoma. The adenomata, by their mere mechanical

effect, cause congestion and irritation. Proliferation of connective tissue occurs in an effort on the part of nature to encyst these growths. The stroma of the gland participates in the connective-tissue hyperplasia. Later on adenoma is replaced by adenofibroma. Later still adenofibroma is replaced by a fibroid degeneration. This may be more or less circumscribed in certain areas, or diffuse. It will be understood, of course, that certain cases do not conform to the course I have outlined, fatty degeneration of the prostate and atrophy associated with general fatty or atheromatous degeneration being not infrequently seen.

It should be unnecessary to emphasize the vast difference in the danger and mortality of operations performed at an early period, before infective bladder, ureteral and renal changes have occurred, and those late operations in which complications have arisen and the operation is performed in a septic field. I state unhesitatingly as my opinion that early operations upon the prostate in otherwise healthy subjects, in whom kidney, ureter and bladder are sound, are, in competent hands, not more dangerous than interval operations for appendicitis. It is certainly not more serious than an ordinary perineal urethrotomy, and by no means compares in severity with the lateral operation for stone.

#### *Why Most Statistics are Valueless*

The statistics of prostatic surgery thus far gleaned are almost valueless, for the reason that the cases operated on have not been classified and in many cases have submitted to the operation as a *dernier ressort*, to say nothing of the varying competency of operators. I reiterate here the plea I have so frequently made for more careful supervision of the urinary function in the male, the early diagnosis of prostatic hypertrophy, and immediate operation in progressive cases. By this plan only will prostatectomy eventually be placed upon a plane somewhat similar to that occupied by ovariectomy, an operation which, when it was performed as a last resort, was attended by tremendous fatality. Now that



the mere discovery of an ovarian tumor is universally accepted as an indication for operation, the mortality is extremely slight.

### *Indications for Operation and Selection of Cases*

It is necessary to consider several factors in the conditions presented by different patients, the importance of the age of the patient being only secondary to the condition of the bladder and kidney, and especially the former.

1. Patients at or not far beyond middle life, with sound bladder and kidney, and pronounced, progressive symptoms of prostatism. These should be operated upon, as a rule, as soon as palliation is found to be ineffective, and the catheter becomes necessary from recurrent retention.

2. Patients of the foregoing class in whom slight or moderate pathologic changes of the bladder, ureter and kidney have occurred. These should usually be operated upon.

3. Cases at about the mid-period of life, in whom serious renal disease exists. These cases should be treated by palliation, either by the catheter or simple suprapubic drainage.

4. Progressive cases of from fifty-five to sixty-five years of age, in which the bladder and kidneys are either sound or not severely diseased. Operation is here indicated. In this class of patients, where serious bladder and kidney disease exists, operation may be inadvisable.

5. Cases in patients above sixty-five years of age who have already begun the use of the catheter, and in whom the bladder is not septic. These cases should not be operated upon, as a rule. Where serious complications exist, it is necessary, in such cases, to resort to palliative operations. In case the kidneys are seriously disorganized, however, surgical means of intervention may be absolutely contraindicated.

There are many cases, to be sure, in which patients in relatively advanced life may be operated upon. In cases in which the patient is seventy years of age and upward, in whom the use of the catheter is not attended with discomfort and the patient remains in a satisfactory condition, generally and locally, there is a question in my mind as to whether the operation



DR. G. FRANK LYDSTON

Well known, not only as medical teacher and author of professional text-books, but also as a story-writer and novelist.

should be performed save in exceptional instances.

In cases of advanced age in which catheterism is not performed with facility or fails to make the patient comfortable, radical operation should be considered. In many instances, however, it is better to perform a palliative operation for suprapubic drainage and reserve prostatectomy for later performance. In some instances permanent suprapubic drainage is, in my opinion, the only operation permissible.

My conservatism in regard to radical operations in patients of very advanced age is inspired not only by what I believe to be the best interests of the patient, but also the best interests of the surgeon. Every fatality resulting from prostatectomy counts for more on the part of the laity and the general practitioner than a dozen cases successfully operated upon. The lay and professional bias here is very much stronger and less rational than in most fields of operative surgery.

There is a tendency on the part of enthusiastic workers in the field of prostatic surgery to routinism. In some instances the routine operations are performed by men who exhibit the most careful discrimination in other surgical fields. The perineal operation is the operation of election where it is practicable. That it is practicable in all cases I do not believe. I have met with cases which I believe no man living could possibly have operated upon successfully by the perineal route, combined operation having been necessary. It is well to begin by the perineal route and to add suprapubic incision where necessary. Perineal incision not only does not complicate the operation, but facilitates drainage, which can be performed by the through and through method, a method which is probably the best thus far devised.

It is the fashion of some surgeons to make a prolonged cystoscopic exploration. This is often done under anesthesia. I assert unhesitatingly my belief that in the majority of cases cystoscopy is not only useless, but dangerous. The danger of any subsequent operative procedure compounds rapidly with every preliminary exploration, and especially if anesthesia be employed. In most instances the only result obtained is the demonstration of cystoscopic expertness on the part of the surgeon, and the gratification of his curiosity as to the appearance of tumors which, if he understands his business, he well knows he must remove by operation sooner or later. I have met with a number of cases in which I am confident the life of the patient was destroyed by diagnostic overenthusiasm.

The patient should be prepared for operation by a preliminary urinary antisepsis *via* both internal medication and vesical irrigations. Rest in bed for a few days is usually advisable, but in elderly patients it should be employed with great circumspection, as they become debilitated very rapidly under confinement. Flushing of the kidney by means of liberal quantities of pure spring water is, of course, essential. Care should be taken in the matter of diet. These patients, other things being equal, should receive a liberal amount of food of nourishing quality, due deference being paid to the condition of the stomach with reference to its capacity for digestion of solid foods. It is well to ascertain the individual peculiarities of the patient in regard to his dietary, and after determining the kind of food which best agrees give him plenty of it.

As is true of all operations involving chronic obstruction and infection of the genitourinary tract, chloroform preceded by hyoscine-morphine is the anesthetic to be used. Ether, in my opinion, should be given only in very exceptional circumstances, which it is hardly necessary to discuss here.

The patient is placed in the usual lithotomy position, and after the introduction of a sound or grooved staff the thighs are flexed strongly upon the abdomen. In this position the prostate is brought much nearer the surface of the perineum than in any other. After the usual preliminary asepsis, a median longitudinal incision is made in the perineum, from well forward toward the scrotum to a point just in front of the anus. Instead of the linear, a curvilinear or Y incision may sometimes be made with advantage. The preliminary incision should include all of the tissues down to the urethra for their entire extent. When the V is made, the flaps should now be dissected up and laid back upon the buttocks, the corners of the triangular flaps being stitched well up on the buttocks by a retention suture of silk. The rectum and anus being well drawn down by a blunt retractor, the incision described will be found to give all the room which it is possible to obtain.

The wound made by this incision is during the operation formidable enough in appearance, but when the flaps are replaced and stitched it differs from the ordinary median incision for perineal urethrotomy only in the existence of the arms of the Y.

While the linear incision is usually effective, there should be no hesitancy in making freer incisions, if necessary. The important parts should be freely exposed by the elevation of flaps, if required. These flaps are composed only of skin and fat. In my perineal work I have no hesitancy in making as large incisions through these tissues as are necessary to facilitate operation. By careful dissection the perineum is opened from above downward, so as to expose the membranous urethra and the capsule of the prostate. An incision is now made in the membranous urethra, the sound withdrawn, and the instrument herewith shown introduced into the bladder closed. It is then opened and the handle of the prostatic tractor given to an assistant. With this instrument it is possible to bring the prostate down within reach with greater ease than with other instruments.

It is probably a matter of indifference as to whether the capsule of the prostate is opened from the urethral side or from the perineum, in introducing the finger for the purpose of enucleation. In most instances the former method has seemed to afford greater facility of enucleation. It is my usual custom to open the prostatic capsule first on one side and then on the other. In some instances I have operated successfully by opening the capsule from one side and then traversing the urethra and opening the opposite side from the urethral surface. The capsule having been exposed, a pair of blunt-pointed scissors is plunged into it and then opened, tearing it sufficiently to admit of the introduction of the finger. Enucleation is now proceeded with. I avoid where possible any cutting or tearing with instruments after the prostatic capsule has been opened. In early cases such instrumental work is unnecessary, the finger being here all-sufficient. I have hitherto seen no objection to

allowing the prostatic capsule to remain. In some cases it is necessary, on account of extreme fibrosis, to remove the prostate, capsule and all, with cutting forceps by *morcellement*.

The adventitious tissue of the prostate having been removed, the bladder is carefully explored with the finger for stone, the prostatic tractor withdrawn and replaced by a good-sized perineal drain, around which strips of iodoform gauze are loosely packed. The external wound is sutured with catgut or silkworm gut and the drainage tube fastened *in situ*, with a strand of heavy silkworm gut passed through the tube and the edges of the perineum. The ordinary dressings for perineal section, with a T bandage over all, are now applied.

The tube is withdrawn in three or four days, or more, according to the degree of infection of the bladder and the condition of the urine. It is nothing unusual for the urine to pass *per vias naturales* at the end of five to eight days. Incontinence of urine, in spite of the beautiful results reported by some of my confrères, may be expected to occur occasionally. It must be remembered, moreover, that no method of operation yet devised has subverted the pathology of prostatic disease to the desires of the surgeon. No matter what method of operation may be performed in an old man, senile bladder and kidneys are left behind, and the degree of perfection with which they carry on their functions is determined by conditions over which the surgeon has absolutely no control.

When I read large series of cases of prostatectomy without complications, failures or untoward results, I feel like congratulating the operator upon his ability to perform miracles, and convert, by his routine operation, whatever it may be, the bladder of an old man into that of a young one, and to guard against accidents that are inevitable in every field of operative surgery. The spring from the "touch-me-not" theory of prostatic disease to the assertion that operation as a matter of routine is always safe and invariably successful is too mighty for the imagination.

# HYPEREMIA AS A THERAPEUTIC AGENT

The adaptation of hyperemia, active and passive, to therapeutic uses, as introduced by August Bier, Germany; with a description of its technic and its range of usefulness

By EDWARD A. TRACY, M. D., Boston, Massachusetts

Orthopedic Surgeon to Mt. Sinai Hospital

TWO comparatively recent contributions to practical medicine merit universal commendation. Both are the work of scientific men, and have stood the greatest of tests—clinical results by competent observers. Both are studies of curative agencies in the blood, that nature makes use of in the cure of disease. One, the opsonic treatment, the work of Sir Almroth E. Wright, of London, is of great scientific interest because it demonstrates new theories of cure in various bacterial diseases. Its employment, however, as yet, is for the skilled laboratory worker only, and it will be a long time, probably, before opsonic treatment will be available for the general practitioner. Its importance is great for another reason, for it gives a death-dealing blow from scientific quarters to the therapeutic nihilism that has for so long held sway in medical centers of education. Of course a vast number of clinical observers, for example, the followers of Waugh and Abbott, needed no Wright to make them optimistic in the treatment of disease; they have the evidence of their personal experience with efficient drugs for the firm basis of their therapeutic optimism.

The other contribution to practical medicine, is the hyperemia treatment by August Bier, now Germany's leading professor of surgery. Bier's work cannot be overestimated. For years his confreres have fought his opinions by the stinging, heartaching method of quietly ignoring his claims. Now these opinions are getting the recognition that they merit and Bier's fame is deservedly secure as one of the greatest medical teachers of his time. Not the least merit of his work is its simplicity, and its practical utility in general practice. In this paper

the essentials of Bier's hyperemia treatment are given, and the scientific observations upon which it is based are abstracted.

Bier distinguishes two kinds of hyperemia: active or arterial hyperemia, in which the tissues are flooded with bright arterial blood; and passive or venous (or stasis) hyperemia, in which the tissues are distended because of diminished venous outflow.

He describes three practical methods of producing hyperemia for therapeutic purposes: Active hyperemia is produced by means of air heated to about 300°F., surrounding the parts treated; and also by means of suction, enclosing the part treated in a glass receptacle from which air can be pumped. Passive, venous or stasis hyperemia is produced by means of elastic compression of the veins draining the part treated.

In this paper the suction method of producing active (or arterial) hyperemia in limbs will not be treated of, because the apparatus used is so expensive as to preclude its use in general practice; moreover, as an efficient active (or arterial) hyperemia can be more generally produced by hot-air, the suction method need not be regarded as essential.

Bier in his book, "Hyperemia als Heilmittel," describes the general effects of hyperemia under the various headings: Analgesic, Bactericidal, Absorptive, and Nutritive Effects of Hyperemia. His chapters on these subjects are briefly epitomized here.

## *Analgesic Effects of Hyperemia*

No effect of hyperemia is more striking than the relief of pain. Both active and passive hyperemia have this property. A joint attacked by painful chronic rheuma-

tism becomes less sensitive and occasionally painless after treatment for one hour in the hot-air apparatus. The influence of stasis hyperemia (the technic will be described further on) in the furious pains of the grave forms of gonorrheal rheumatism is even more marked; they subside a half to one hour after the application of the stasis bandage. The various forms of hyperemia remove neuralgias and headaches, and diminish to a considerable extent the sensitiveness of joints which have become painful from various causes.

#### *Bactericidal Effects of Hyperemia*

If we should observe cases of infectious diseases, which not only rapidly improve and heal under treatment with stasis hyperemia, but immediately after the application of the remedy experience a sudden change, we shall hardly be left in doubt that we have to deal with a destruction or at least an attenuation of the causative bacteria. Experimental proof of this effect of stasis hyperemia has been furnished by Nötzel. He succeeded in keeping alive fifty-one out of sixty-seven rabbits in which certain body-parts statically hyperemic were injected with otherwise fatal doses of anthrax bacilli and very virulent streptococci. The sixteen that died had the kind of stasis hyperemia termed "cold stasis," the harmfulness of which will be described later. That stasis hyperemia alone saved the fifty-one animals from death is demonstrated by the fact that a few weeks later they were inoculated with the same bacteria and all died as well as did animals used for the purpose of control.

#### *Absorptive Effect of Hyperemia*

Active hyperemia produced by hot-air is absorptive. It is therefore of use in removing edema and for simple joint effusions. Bier has used it in the treatment of elephantiasis. It is useful also in edema following healed fractures of the extremities. If hot air, however, be applied too long (several hours) it will produce edema. And in this we have an example of the contrary effects produced by different dosage of a physical remedy. In drug therapy we have many such examples. Our modern

knowledge of the fact that the most absorption in the body is done through the capillaries (and not, as formally believed, through the lymphatics) would lead us to expect the absorptive effect of active hyperemia. Klapp demonstrated, experimentally, that active hyperemia had a decided effect on the acceleration of absorption. Stasis hyperemia, during the application of the stasis bandage, diminishes absorption. But as soon as the bandage is removed absorption is greatly increased—so that, on the whole, the final results of stasis hyperemia mean acceleration of absorption—when the stasis bandage is applied for an hour. If longer applied, Bier does not consider absorption to be accelerated and in such cases recommends the addition of massage.

#### *Solvent Effects of Hyperemia*

Besides the absorption of water or substances soluble in water, as edema and effusions, hyperemia is effective in the absorption of solids, such as blood-clots, granulations in joints, and the causative material of stiff joints. These substances must first be dissolved and hyperemia can undoubtedly accomplish this. Under its influence, Bier occasionally observed the disappearance of arthritic granulations and nodules in tendons in a comparatively short time. This solvent action takes place with all forms of hyperemia. The improvement of stiffened joints, which follows the application of either active or passive hyperemia, must first of all be ascribed to the solvent properties of the blood. Certainly a good many other things must be taken into consideration. In all probability, connective-tissue adhesions become softer, more pliable and elastic in consequence of serous saturation and swelling. Bier repeatedly showed that a great portion of the removal of stiffness from a joint is due to the relief of pain by the hyperemia, for otherwise it were not imaginable how a man could move his joint when it is afflicted with chronic rheumatism after an hour's treatment in the hot-air apparatus, or a gonorrheic his severely painful completely ankylosed joint after an hour's application of stasis hyperemia.

Hyperemia, both active and passive, leads to rapid growth of the covering epithelial structure. Thus, in summer, when the skin is supplied with more blood than in winter, hair and nails grow faster. Bier and Helferich found that increased growth of

There is no doubt as to the influence of passive hyperemia on the growth of the bones, both in length and thickness. In proof, Bier quotes several authors. Helferich increased the length of a leg by 2 cm. in a sixteen-year-old girl by stasis hyperemia.

Experiments by Ambroise Parè, Dumreicher, Nicaldoni, Helferich and Thomas prove that the formation of callus in fractured bone is considerably increased by stasis hyperemia.

Bier has repeatedly treated by hot-air ulcers which have not healed under other remedies, and with success. Ullman treated infectious ulcers likewise with success. Hyperemia is the cause of the regeneration of tissue that occurs in these cases.

Having touched upon the effects of the various forms of hyperemia the practical application of this curative agent in disease, will be briefly treated of.

As previously mentioned any remedy, whether physical or chemical, acts differently according to its dosage. A medicine in small dosage may be beneficial, and in larger dosage very harmful. It is likewise with the different forms of hyperemia. Thus, active hyperemia by means of hot-air, when applied for an hour or at most two hours daily, is one of the most effective absorbing agencies for reducing edema. But if hot-air be applied to a portion of the body for seven to ten hours it produces an intense form of edema. Stasis hyperemia (produced by a bandage or a suction-apparatus) in a medium degree, is one of the best pain-relieving agents in different



DR. EDWARD A. TRACY

A Boston surgeon whose work is well known to CLINIC readers

hair may often follow passive hyperemia. Arterial hyperemia has the same effect, manifested by the hairy growth on the hands of surgeons, which because of frequent washings are in a quite continuous state of hyperemia.

affections. If an excessive degree be applied, it produces violent pain, and most disagreeable sensations. In using these remedies, therefore, we must be as careful as with medicinal remedies, remembering that reactions differ in individuals—and, by ex-

perience, learn in what degree and duration, hyperemia is best suited for the individual case treated. By following Bier's technic and observing our cases attentively, it is a simple matter, however, to become quite expert in the application of hyperemia in the treatment of the many diseases in which it has proved curative.

In hyperemia it is the blood that is the curative agent. In every case treated, therefore, it seems to me desirable that we should aim to put the patient's blood into the best possible condition. This should be done by attending to the patient's elimination, digestion, and assimilation. Iron, blood salts, and nuclein are indicated in many cases. Followers of the teachings of Waugh and Abbott, the able editors of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, well know how to get the blood into the best possible condition. Hygienic measures, right living in every sense, must be attended to, especially in constitutional diseases like tuberculosis and the chronic arthritides. This point, the betterment of the blood, by the way, has not been touched upon by Bier, and yet it seems to me of importance, especially, as before mentioned, in chronic cases.

#### *Joint Tuberculosis Treated by Hyperemia*

Bier's treatment of joint tuberculosis is simplicity itself—easily mastered and carried out in practice. I find it an efficient adjuvant to the method used by me for the last ten years: that is, immobilization, protection from weight-bearing, and constitutional treatment. Certainly the results I have had in the treatment of this disease, and which I have reported in *The New York Medical Journal* for Sept. 6, 1906, have been such as to make me thoroughly optimistic in the treatment of joint tuberculosis and indeed I do not see the need of either opsonic treatment or Bier's method, so constant have been these good results. I have used Bier's method in a few cases, and with results that convince me of its value in the treatment of those cases of joint tuberculosis in which it is applicable. In the treatment of tuberculosis of hip-joint, dis-

ease of the sacroiliac joint, and in Pott's disease of the spine it is not applicable—for how can stasis hyperemia be produced in those joints? None the less tuberculosis of these joints is curable, and cases cured by immobilization, protection, and constitutional treatment are given in my paper referred to above.

Bier was led to employ hyperemia in the treatment of joint-tuberculosis by the observations of Farr and Travers, in 1815, and Louis, in 1826, calling attention to the frequency with which pulmonary stenosis was met with in phthisis (pronounced anemia of the lungs which this form of heart disease produces); and, on the other hand, Rokitsky maintained that disease of the heart accompanied by fulness of the blood (hyperemia) in the lungs offers immunity against tuberculosis. Most physicians agree with Rokitsky's idea and admit a relative immunity of "stased" (hyperemic) lungs against tuberculosis.

After experimentation Bier found that stasis hyperemia was curative in joint-tuberculosis. But it must be carefully applied. An elastic band is applied around the affected joint, just tight enough to produce hyperemia without pain. It is applied an hour daily. Longer applications of the bandage he found provocative of abscess formation, and increase of the disease. If the limb, on the application of the stasis-bandage, becomes colder to the feeling than the other limb, the case is not suitable for hyperemia treatment. It is a favorable sign if hot stasis is produced by the bandage, that is if the temperature of the skin becomes elevated and the joint takes on the appearances of an acute inflammation. The treatment should be kept up for several months—so long as improvement takes place. Slight use of the affected joints is permitted, if it be not painful, and active and passive movements are encouraged, avoiding the production of pain. Motion in tuberculous joints I believe contraindicated, for motion in such joints causes a lowering of the opsonic index—a thing to be avoided. For that reason, when using Bier's hyperemia—keep the joint at rest.

Gonorrheal arthritis, especially the severe form that leads to ankylosis, is amenable to stasis hyperemia. In the graver cases of this disease, the stasis bandage must be applied for ten or twelve hours or even longer. The bandage gives relief from pain, and for this reason is worn at night. It had best be applied an hour before retiring so that we can determine that it is efficiently applied. Sometimes, in the graver forms, the bandage is kept applied twenty-two out of the twenty-four hours. The stasis must be vigorous, but not such as to increase the pain. A bandage applied relatively loose produces very intense and hot stasis, but relieves the pain almost instantaneously. Careful passive movements are commenced at once, and as soon as possible, active movements. In the intervals, when the bandage is off, the limb is elevated in order to diminish the old edema, so that a new one can take its place after the reapplication of the bandage.

In acute articular rheumatism, Bier found that pain disappeared quickly after the application of the stasis bandage.

#### *Hot-Air Hyperemia in Chronic Stiff Joints*

The effects of active hyperemia produced by hot-air merit recognition in the treatment of chronic rheumatism and arthritis. Here, especially, the relief of pain and increase of mobility are striking. After a time one can observe reduction of swelling, decrease of existing crepitation, and disappearance of abnormal nodular swellings.

Stasis hyperemia for several hours a day can also be employed with advantage in these cases.

#### *After-Treatment of Fractures*

Bier has demonstrated that hot-air hyperemia is of especial value in the absorption of edema, and gives notes of a case of elephantiasis, that was remarkably improved by its use. In the edema that develops on rising, after bone-fractures have healed, hot-air hyperemia is very effective.

Effusions into joints are generally readily absorbed by hot-air hyperemia; Bier finds it more effective than the ordinary treatment by immobilization and rest in bed.

Bloody effusions into joints can be as successfully treated as watery ones, by this method. The rapid disappearance of pain in these cases is the first and most pronounced sign of improvement. Hot-air should be applied in all cases when vigorous absorption is required, and it should be applied daily for an hour—at most, two hours. In the latter case the affected limb is to be exposed to the remedy morning and evening, an hour at a time.

#### *Neuralgia, Lumbago and Sciatica*

Trigeminal neuralgia, lumbago and sciatica, are all beneficially affected by active hyperemia, by hot-air. Particularly striking is the pain-relieving effect. Eight cases of trigeminal neuralgia were treated by Bier, six of which were of a grave form. Of the eight cases, five were cured by active hyperemia by means of hot-air apparatus. Three cases were not cured and Bier did resection of the nerves in two of them. For varicose veins of the leg Bier advises application of hot air, and a cold douche over the bright-red skin. This method he believes has a gymnastic effect on the vessels, stimulating them to a more normal condition. Ritter has shown the beneficial effect of hot-air application to frost-bite, attributing to it a stimulation of the regeneration of the injured cells.

#### *The Writer's Experience with Hyperemia*

I have employed both active and stasis hyperemia in many cases, and always with good results. Stasis hyperemia I got by using Bier's stasis bandage, made by the Lister Company, Boston. With it good stasis can be safely gotten. The band should be applied tight enough to reddens the skin below the point to which it is applied, after a few moments. If pain is caused, it should be loosened. The rule for correct application of the bandage is to produce redness of the skin without pain. If redness be not produced and a cold stasis results, the case is not suitable for stasis-hyperemia treatment—for a cold stasis is found harmful. Such cases are rare. I have produced stasis-hyperemia in many



cases of tubercular joints, infected wounds, and in case of facial erysipelas—always with curative results. In the case of facial erysipelas, I applied elastic constriction around the neck for several hours a day, but at the same time pilocarpine was administered—the case being a sthenic one—in accordance with Waugh's advice. After four days the erysipelas inflammation ceased, and an insomnia and nervous condition developed that was cured with scutellarin and sodium bromide. Of course the bowels were looked after during the sickness.

In the cases of infective wounds treated, evacuation of pus was attended to, echinacea and calcium sulphide were given. I have treated many such cases without hyperemia—and got good results—but since studying Bier's work I add the stasis bandage for several hours a day to the other treatment and believe it adds assurance to a cure. In infective wounds, no precaution can be regarded superfluous to insure cure.

In many cases of joint-tuberculosis I have used stasis hyperemia, together with fixation and protection of the diseased joint, and always with excellent results. I believe fixation is essential in these cases, both from clinical experience with the disease, and also from the scientific fact that motion in a tuberculosis joint lowers the opsonic index, which is the measure of the body's resistance to the disease. All things considered, I believe Bier's hyperemia an admirable contribution to the therapy of joint-tuberculosis, wherever applicable.

In the production of active hyperemia I have used hot-air apparatus of different makes. My preference is for the Universal Portable hot-air machine. This apparatus, as its name implies, can readily be transported to a patient's home, and hot-air can be applied to the head, for facial neuralgia; to the back, for lumbago; to the surface

which overlies the great sciatic nerve, for sciatica; besides to the hip, knee, ankle, shoulder, elbow and wrist joints.

Another advantage is, that in hospital or office use, it permits the treatment of two patients at a time, one at each end of the heater. The price is very moderate. At present I have five of these machines in use, renting them to patients for a month or more of treatment. The apparatus can be set up in any place, it carrying its own fuel, wood alcohol or denatured alcohol.

#### *A Few Cases Where Hot-Air Was Used*

I will briefly allude to several cases recently treated by hot-air hyperemia. Two cases of fracture at the ankle joint: The thickening and edema of the tissues were much benefited by hot-air application for an hour every day. I believe bony union is quicker, because of the increased circulation in the injured tissues. In one of these cases the patient was on his feet in two weeks after the accident, hot applications having been made daily after the fifth day. A case of synovitis of the knee joint, with a tenderness localized in one spot suggesting a periostitis, caused by the kick of a horse and seen by me two weeks after the accident, yielded quickly to hot-air application, the man attending to his business. The treatment previous to mine had been nugatory. A severe case of lumbago yielded after several applications of hot air. Several cases of chronic synovitis improved under hot-air applications. Space forbids further details of my personal experiences—and I will close by impressing on my fellow practitioners, that they owe it to themselves and their patients to familiarize themselves with the practical application of the teachings of Bier, a truly great surgeon, who fearlessly teaches a therapy that limits the field of the knife.



# A GERMAN OPERATING THEATER

A description of the new operating theater in the University Women's Clinic at the University of Freiburg, Germany. The method of inducing anesthesia

By WILLIAM L. HOLT, M. D., Heidelberg, Germany

**D**URING a recent visit at Freiburg I had the good fortune to see a laparotomy performed in the new operating theater at the University Women's Clinic. The arrangements were so excellent that I thought a description of them might interest the readers of *CLINICAL MEDICINE*. The Germans are surely masters of technic in surgery, as in all the sciences.

The most striking things on entering the room were the large windows and the absence of chairs or seats of any kind. Daylight came in unobstructed through a great central window, six feet wide and running to the roof, and also through two narrower windows on each side, which were also some ten feet high and quite unshaded. Not content with this illumination, however, perhaps because the morning was cloudy, the field of operation was especially illuminated by a shaft of light projected from a powerful lamp set in the rear wall, the rays being reflected down perpendicularly by a mirror

overhead. The mirror had a very convenient arrangement for adjusting its position as well as its angle, sliding easily back and forth on rails overhead and controlled by an endless chain which ran down the rear wall within easy reach.

The floor was of very smooth and handsome artificial stone; the walls were wainscoted with dark green smooth tiles and above white. The tables, which were numerous and displayed several very complete sets of instruments, needles, and sutures, were of the customary iron, and were painted white.

The operator and his two assistants wore regular surgical gowns and also had their heads, chins, and mouths all covered with a cap or hood of gauze.

The operation was a myomectomy. Anesthesia was introduced by scopolamine and morphine and continued by chloroform, which was administered through a tube from a balloon.

## PERTINENT FACTS ABOUT APPENDICITIS

Things which the general practitioner should bear in mind about this common disease. Read before the Oklahoma Central and Woods County Medical Societies, Garmen, Oklahoma, October 29, 1907

By A. L. BLESCH, M. D., Guthrie, Oklahoma

Surgeon to the Methodist Episcopal Hospital

**I**T would seem that an apology would be in order for addressing a professional audience such as this upon so old and hackneyed a subject as appendicitis. It is so trite that all of us, from the newly fledged graduate with his professional pin feathers just appearing, to the grizzled veteran of many campaigns whose professional spurs

have been won on many a hard, contested field, in hand-to-hand grapple with the grim and merciless enemy, believe we know all about it.

But to all of you who can reply from bitter experience I ask you in all candor: Is an apology appropriate? Do we know all about it? One glance over your own

limited field of professional activity will assure you to the contrary. There are yet too many deaths from appendicitis in this country and that too a disease in which 2 percent ought to be the uttermost mortality rate. In a death-rate exceeding this some one is to blame. I have placed the mortality higher than I believe in my soul it should be.

It would seem, in theory at least, that we all have a splendid knowledge of the disease. Certainly, the etiology, pathology, clinical course and even the cure, are clear to us; but in a practical way, in the application of our knowledge to the concrete case, there is something missing, for surely no one in this assembly but will agree with me that the death-rate in this disease far exceeds two percent.

It will be the object of this short paper to ignore entirely etiology and pathology and deal alone with the causes of excessive mortality and to discover by a heart-to-heart informal talk with you how to diminish this unnecessarily high death-rate.

This subject naturally divides itself into two general classes: (1) A consideration of what might be considered a normal death-rate in untreated appendicitis and (2) a question of diagnosis.

As a proposition not varying far from the exact truth it may be stated the death-rate of appendicitis, untreated or treated medicinally alone, which amounts to the same thing, is 20 percent. That is to say, 20 percent of all the cases of appendicitis treated medicinally or not treated at all, die either in the first or in subsequent attacks of the disease.

If anyone present should be disposed to question the truth of this statement I would direct him to review something like 10,000 cases so treated, and when the task, which will be no easy one, is finished he will agree with me, I believe, in the statement that 20 percent is a very conservative estimate indeed.

Also it may be added that surgery done at the wrong time or as a forlorn hope brightens up this gloomy picture but little. An early diagnosis is the one key that will unlock this Pandora box of troubles and help us to at least offer the right thing at the right time.



DR. A. L. BLESCH

A man from the new state of Oklahoma, whose reputation as a surgeon transcends even the boundaries of that wonderful commonwealth.

It is indeed strange that any case of appendicitis should go twenty-four hours undiagnosed or erroneously diagnosed in this day, after so much has been faithfully worked out for us by the pathologist and surgeon working together. There are two reasons for it, the first of which is that in some instances—perhaps many instances—the physician is not called during this halcyon time. This can only be overcome by each doctor so educating his clientele that

any pain in the abdomen, of a moderate degree of severity should lead to the consulting of a physician. Please do not forget it may be *anywhere* or *everywhere* in the abdomen, when the patient is kind enough to present himself for examination.

A few days ago the writer operated on a case of this kind in the sixth or seventh day of the fourth attack; in the other three attacks the patient had not consulted a physician at all and the duration of his disease had extended over a period of eight years. This attack was seen by a physician and *not diagnosed positively* for six or seven days from its onset and not until a large retrocecal abscess had formed requiring transperitoneal drainage and a large gangrenous area on the cecum itself, which a few days after operation sloughed and occasioned a large fecal fistula which will necessitate a secondary operation for closure. This man is fortunately recovering; but look for one moment at the dangers he has encountered and will yet face and the stormy convalescence, all of which might and could have been avoided by an early diagnosis followed by prompt operation.

In contrast with this case I will cite the case of my own daughter, aged 16, a strong, healthy girl, who was attacked with nausea, diffuse pain in abdomen, slight *rigidity* of right rectus, *tenderness* perceptible on gentle but deep palpation at McBurney's point, slight *fever*, in forenoon, at 5:00 p. m. A positive diagnosis was made at 9:00 p. m. She was operated by Doctor Horace Reed, at the Methodist Episcopal Hospital, through a one-inch gridiron incision, was sitting up in forty-eight hours and home in one week and practically entirely well in two weeks.

Now, my dear doctor, which one of these two patients would *you* rather be, or would you rather have a member of your family to be?

#### *When the Doctor is Responsible for Delay*

I do not forget that many times a patient refuses operation after a prompt diagnosis is made and operation urged, but I am also not unmindful of the sorrowful fact that too many times the physician is the one who

holds out the, alas! too many times vain hope of interval operation or spontaneous recovery, founding this on a lucky case or two within the narrow limits of his own observation.

What I am now about to say it is my desire that you think seriously about. *The only cases of appendicitis that cannot be diagnosed accurately enough for all practical purposes in the first twenty-four hours, are the few which may be complicated or confused with right ureteral colic, pendant diseased gall-bladder, and in the female right tubal disease—all of which, except the ureteral colic, and it may be, are surgical conditions.*

There are four cardinal symptoms of appendicitis, any three of which being present are sufficient to warrant a diagnosis:

1. Pain. This may and indeed is in the first hours usually diffuse—passing with the peristaltic waves over the belly and generally accompanied with nausea and sometimes vomiting.

2. Nausea with or without vomiting. It may require careful examination to elicit it but I can say truthfully that I have rarely found it absent.

3. Tenderness and right rectus rigidity. Very carefully must these be examined for: While distracting the patient's attention by a rapid fire of questions quite foreign to the point being examined, make gentle but persistent pressure with the tips of two or three fingers at McBurney's point. When the appendix and head of cecum is approached the patient will exclaim suddenly or there will be a quick sharp contraction of the right rectus almost throwing the fingers off the sore spot. This may be repeated often enough to satisfy one if sceptical.

4. Fever. This is not high as a rule, but usually ranges low, from 99.1-2 to 101°F. although it may be as high as 104°F. While this may not be present at the time the examination is being made, a carefully kept clinical chart will always show it present at some time during the attack. With any three of these cardinal symptoms present a diagnosis should be made without difficulty.

Aside from those cases, complicated with or confused with renal or ureteral colic or tubal disease or gall-bladder infections, there is something confusing to the average mind in the fact that the pain quite generally, in the beginning, is diffuse or may localize at first, apparently, in the stomach or the left side. This latter symptom has perhaps been responsible for many errors in diagnosis. As pointed out by Chas. H. Mayo, this left-sided appendix pain is invariably associated with a low hanging or very long appendix which hangs over the brim of the pelvis. We have in our work at the Methodist Episcopal Hospital very frequently verified this at operation and do now many times diagnose the location of the appendix alone from this symptom. But do not get the idea that because the pain is located in or referred to the left side that the *tenderness* and *rigidity* will also be in that region.

In one of our cases, however, this was the case. Pain, tenderness, rigidity, and finally tumefaction were all there, yet the patient had had several typical attacks of left-sided appendicitis under the observation of Dr. D. D. McHenry, and, finally, dying from a general septic peritonitis as the culmination of, I believe, the third attack. The writer saw the patient in this attack while the attack of peritonitis was under full headway and refused operation believing it too late. The patient dying soon after, a post-mortem was made by Drs. McHenry and C. E. Lee with the result that a very long appendix was found herniated through a congenital opening in the mesentery and the tip had projected into the left pelvis, finally becoming gangrenous, perforating and sloughing off, with the result I have given above.

The pain radiation is so different in renal colic and appendicitis that they should not often be confused. If the attack is high up in the ureter or kidney itself the pain is usually about this organ, if in lower half of ureter it is radiated downward along ureter to end of urethra and testicles. The attitude the patient assumes is also almost always characteristic for each disease.

An incompletely descended appendix may offer difficulties of differentiation from gall-bladder and ducts, that even the most expert may not be able to overcome, but remember, that in either of these patients the condition is surely surgical and a surgical diagnosis is, in these comparatively rare cases, all-sufficient.

In answering this question the fearful responsibility is going to be brought home to us. In almost every death from appendicitis some one is to blame—sometimes the patient, sometimes his friends, and only too often his medical attendant.

The axiom that THERE IS NO MEDICAL TREATMENT FOR APPENDICITIS should be blazed in letters of living gold across every physician's doorway so that he who runs may read. By that, we do not mean that no patients get well with, or in spite of medical treatment, but that the patient is never cured thereby. As stated above, 80 percent will recover if nothing is done for them; it is the doomed 20 percent for whom we plead.

Only one-half of 1 percent will die if operated upon in the first twelve hours of an attack, 2 percent if operated upon in the first twenty-four hours, one-half of 1 percent if operated upon in the interval.

In my own and Doctor Reed's work I will say that *no* case has died when operated upon within the first twenty-four hours or in the interval. This result is no doubt being duplicated in careful hands everywhere. My reason for calling your attention to it is that you will observe vividly the lesson therein so plainly to be seen.

Upon the general practitioner, out in the field, must we depend for the education of the laity to this important life-saving truth. The doctor must educate each his own *clientele*. If early operation is refused he has discharged his own duty and the responsibility must then rest elsewhere.

As an aid to him in the campaign of education the surgeon should operate with the utmost caution, refusing operation to those *in extremis*, letting the credit for the death go where it most truly belongs—to medicine and not surgery.

# FIFTY-FIVE SURGICAL OPERATIONS

In all these the patients were operated on while under the influence of hyoscine, morphine and cactin, used as the anesthetic. The advantages of this form of anesthesia

By FELIX WILLIAM GARCIA, M. D., St. Louis, Missouri

Professor of Abdominal and Pelvic Surgery in the Hippocritean College of Medicine

**D**URING the last year I have completed fifty-five cases of major surgery, in all of which I have used the H-M-C tablets. This has been sufficient working experience to base conclusions upon. My anesthetists, Drs. Kinner and Hoefler, especially Dr. Kinner, have made careful observations and records in all cases, most of which were done at the Lutheran Hospital of this city. In addition to abdominal sections we had one case of eclampsia gravidorum of eight months and one week. I did an *accouchement force*, with recovery of both mother and child. In this case I used two full-strength tablets; one an hour and the other two hours preceding operation.

We had two cases of diabetes mellitus and several nephritics (albumin 1-2 percent or a little more). Both diabetics were young women and the uranalysis (which *always* precedes operation) put us on guard as I had not known the patients previous to entering hospital. I must confess, I ordered the hypodermic of two full-strength H-M-C's with some trepidation, but both patients suffered no unusual experience. Exactly one ounce of Squibb's chloroform (from record) was administered, for the two. The record states in remarks (nothing unusual) duration of each operation about forty minutes. (Salpingo-oophorectomy.)

## *Advantages of H-M-C*

The advantages of H-M-C tablets I find are the avoidance of shock and fright upon entering the operating-room and the absence of nervous tension of hours preceding operation. This is of great import as one will find by studying patients before operation. Absence of nausea following operation, and the continuance of sleep for a few hours, which prevents pain of wound

before adherence calms severed nerve-ends are also points greatly in favor of this anesthetic.

The uniformity of anesthesia is, to my mind, the best of all effects. Every operator will realize how difficult it is to obtain anesthesia of equal depth throughout entire operation. This tests the skill of the best anesthetist; and I can best secure this by the tablets and chloroform combined. With few exceptions, two full-strength tablets were used, one immediately, and the other one hour, preceding operation, and about one-half ounce of chloroform used in addition, for work of an hour or more.

Properly speaking, the H-M-C tablets are more of an analgesic than anesthetic. The effect is greatly increased by inserting cotton in the ears and placing a towel over the eyes. Light and sound excluded, the patients promptly go to sleep. They are not sensitive to touch so much as to light and sound. The tablets, I believe, render the chloroform more safe, owing to stimulation of both morphine and cactin. In a few cases I tried three full-strength tablets, and all these patients were operated upon without chloroform; but in all these was present some cyanosis which perturbed me. I do not think there exists any reason why three tablets should not be used instead of two whenever desired, without chloroform, except the cyanotic appearance; but here, as everywhere, we find every operator suiting his personal tastes, and I must confess I dislike the cyanosis produced by three tablets. This is not produced by two, usually. Besides, chloroform has a relaxing effect unexcelled by any other agent. For bimanual examination to obtain perfect diagnosis I use one tablet and chloroform, the latter being essential to perfect relaxation.

I believe the H-M-C tablets are a genuine gift to surgery, leaving no excuse for the barbarism and savagery practised in many of our hospitals by surgeons who subject patients to frightfully painful operations with a "little cocaine" hypodermic because "the patient cannot take chloroform on account of her heart," and then remove a

thyroid (as I have seen done) with the patient crying in agony to her God, for an hour by the watch. Such savagery these tablets certainly can stop, and we can make a step forward to the goal that in our hospitals no twinge of pain shall be felt during or after operation, nor degree of temperature shown after operation.

## ... SURGICAL THERAPEUTICS ...

### TREATMENT AFTER OPERATION FOR FISTULA

At the completion of operation for fistula of the anus a hard-rubber tube is introduced well above the cut sphincter and gauze tamponed around it firmly. This permits the escape of gas while the barrier of beginning granulation starts upon the raw surface. That granulation may become fairly well established before irritation by the passing feces is permitted, it is best to keep the bowels from moving for six days if possible, a liquid diet being advised. If the packing is saturated with the wound-discharge before this time it may be removed and fresh gauze inserted; but as this is very painful it is better to leave the original packing several days even if it does become very foul of odor. When the gauze is removed a high enema of olive oil or an ox-gall enema may be given. Later a saline laxative is to be ordered.

After the bowels have moved the wound should be cleansed by gentle washing, the two raw surfaces being carefully separated, iodoform dusted in freely and a strip of iodoform gauze carried well into the rectum and packed loosely into the cut; with a pad of absorbent cotton over all, supported by a T-bandage. If possible, the dressing should be made twice daily for some days; later once daily; and as the discharge lessens, every second day, though the patient is instructed to clean it as well as possible after each bowel-movement. Should granulation be too slow, dressing with balsam of Peru

daily will soon stimulate the surfaces sufficiently to insure early healing.

The patient should, when circumstances permit, lie in bed two weeks; but most will insist upon being at work in ten days, which does not greatly retard healing if operation has been done properly. Most careful attention must be paid to building up the general health of the patient during convalescence. Temporary loss of sphincteric control need not occasion anxiety.

### IMPACTED CERUMEN

Much suffering from earache, as well as deafness (particularly in the aged) comes from impaction of cerumen in the external auditory canal. This may be readily removed by warming a little dioxide of hydrogen, pouring it into the ear while the patient is lying on a bed or table, and allowing it to remain for about five minutes. Then if the ear be gently syringed with warm solution of bicarbonate of sodium the plug will be easily removed. If not, it will be next day on repetition of the procedure.

### MESENTERIC ABSCESSES

When operating for appendical abscess it must be remembered that secondary abscesses may have formed in the lymph-glands of the mesentery. This is one reason in favor of opening the abdomen widely (in pus cases) and packing gauze around the abscess before incising it, it being possible in this way to detect the existence of

other, smaller abscesses connected with or originating from the primary abscess around the appendix or behind the cecum. Abscesses of the mesenteric lymph-glands may also be due to suppurative cholecystitis and rarely to infective troubles of the genito-urinary tract; and they occasionally originate as a complication of typhoid. Treatment is free abdominal section, with careful evacuation and thorough gauze-drainage, omentum being carefully packed around the gauze on all sides, whenever possible, to insure prompt and perfect walling-off of the drain. When the omentum cannot be thus utilized, the adhesion of coils of intestine around the gauze may usually be depended upon. It is best not to remove the gauze until after the fifth day, when adhesions are sufficiently firm not to break down during the act of withdrawal; a simple wick of gauze being carried to the bottom of the cavity occupied by the drain, this to be taken out two or three days later. The bowels should not be moved in these cases until the third or fourth day after operation.

#### TREATMENT AFTER INTESTINAL OBSTRUCTION

It is important that the patient be disturbed as little as possible, yet an enema is a good thing to start the peristaltic wave downward soon after the bowel has been opened, early and thorough evacuation being essential to recovery, for retention of the poison in the intestinal tract is as dangerous as the obstruction which caused the toxic agents to form. Thirst is, therefore, to be quenched by small sips of iced, effervescent solution of citrate of magnesia; but little water ought to be given by mouth during the first 24 hours. Large enemata of warm, slightly salt water may be given with advantage every six hours. Perfect quietude is imperative—anxious friends must be driven out and the patient made to sleep if possible. The first few hours after relief of intestinal obstruction are critical ones, and too great care cannot be exercised to secure perfect tranquility for the patient. No matter how much complaint may be

made of pain, morphine must not be given; it increases the danger of paresis of gut, which is almost always an exceedingly serious menace to life. No food should be given by mouth until more than forty-eight hours have elapsed, but a few nutrient enemata are advisable if the patient be weak or complains of hunger. Liquid diet for the next two days is to be ordered.

#### PAINLESS EXTRACTION OF TEETH

The following solution may be used for deadening the pain of tooth-pulling:

Cocaine hydrochloride.....	0.5
Phenol .....	0.5
Camphor .....	0.5
Chloral .....	0.5
Distilled water.....	85.0

Mix. Rub the camphor and chloral together until liquefied; add phenol, cocaine, and lastly water, and filter. A little of this is to be applied to the gums, on absorbent cotton, for about three minutes; then a few drops injected near the root of the tooth, with hypodermic syringe. In two minutes the tooth may be pulled without much pain.

#### STYES

Staphylococcus infection of a meibomian gland is just the same as any other boil except that it affects the margin of the eyelid instead of a hair-follicle on the surface of the body. When the infection first becomes apparent it is good practice to apply

Yellow oxide of mercury.....	0.5
Lanolin .....	30.0

By using this as an ununction every three or four hours suppuration may sometimes be prevented. As soon as pus forms the little abscess should be opened and the pus carefully evacuated. Then the eyelid (especially at its margin) should be washed frequently with saturated solution of boric acid to prevent infection of adjacent glands and follicles. If the pain be severe a little acetanilid may be prescribed: one-third of a gram (5 grains) three or four times a day, either alone or with half a decigram (gr. 3-4) of codeine. As a rule styes, like boils,



are found in patients with bad general health; so iron, strychnine and arsenic are also indicated, with the use of a small dose

of epsom salt once daily until the "crop" of stytes is entirely eradicated. Try this method of treatment.

## GYNECOLOGICAL THERAPEUTICS

### GENITAL PROLAPSE

As a broad rule it may be said that prolapse of uterus, bladder and rectum is dependent primarily upon deficiency in the pelvic floor—the stretching of ligaments and other tissues being secondary thereto. The chief sources of complaint are frequency of micturition, bearing down, irritation of extruded mucous surfaces and neurasthenic symptoms. But, it should be remembered that, in those strongly predisposed to this trouble, prolapsus sometimes does exist in nulliparæ in whom the perineum has never been torn, as in rachitic subjects, combined with increased abdominal pressure, from increased weight or effort.

In general, prolapsus is insidious in appearance. As to therapeutic measures for the correction of prolapse, pessaries are to be regarded as only palliative, and massage as not generally useful. Injections of paraffin and of quinine have been proposed, but are of little value. The Alexander operation is of little value. Abdominal hysterectomy does not always give lasting results and may produce complications should labor occur. Shortening of the uterosacral ligaments, to be of value, must be supplemented by perineorrhaphy and shortening of the round ligaments. Abdominal hysterectomy is rarely indicated, though it is an excellent treatment for women past the menopause, if combined with perineorrhaphy. Anterior colporrhaphy is also excellent but must be invariably followed by perineorrhaphy. Amputation of the cervix is unnecessary since its increased length is a result, not a cause of prolapsus. Vaginal hysterectomy is to be used only under particular conditions when there are lesions of the uterus that demanded its removal, such as fibroids; and

must also be done only when associated with a close perineorrhaphy.

### CESAREAN SECTION

Dr. C. F. Gissler, of Brooklyn, N. Y., in *The Medical Council*, November, 1907, says: The very interesting paper by Dr. E. Lanphear, of St. Louis, page 369, in *The American Journal of Surgery* (December, 1906), is worth reading. He recommends cesarean section in placenta prævia, in antepartum eclampsia and in narrow pelvis. He pays great attention to the careful preparation of the vagina. He says firm pressure on the uterine circulation is better than elastic ligature. He rightly advises to clamp instead of tying the cord, in order to save time. A strip of gauze should be left in the cervix for drainage. He uses chromic catgut for the muscle, fine silk for the serosa and a continuous catgut suture over this.

### RECURRENCE OF MAMMARY CANCER

Dennis must have had unusually bad cases of cancer of the breast to deal with (provided he makes as perfect an operation as is done by western surgeons), for after a study of his records he says they demonstrate the clinical fact that (1) cancer of the breast is sometimes permanently cured; (2) that cases may go as long as 18 years and yet have recurrence; (3) that in the cases in which no return was present the operation was performed almost without exception within six months from the incipiency of the disease; (4) the more radical the operation within reasonable limits, the better the prognosis; and (5) in some cases in which the outlook was unfavorable, as manifested by extensive ulceration, hem-

orrhage, widespread axillary involvement, however, the end-results have been satisfactory. Palpable axillary involvement, however, according to Greenough, makes the complete removal of the disease more difficult, 12 percent only free from recurrence in such cases, as against 29 percent where no glands were palpable. Dennis reports one case where he removed a sarcoma of one breast, fourteen years afterward

removing a *carcinoma* from the other breast. Vanderveer has reported similar cases. Dennis reports two cases in which the patients had foul hemorrhagic ulcerating breasts, upon whom he operated simply with a view to making the patient more comfortable. To his surprise, one of these patients is still alive, eight years after the operation, the other one four years, and without evidence of recurrence.

## GENITOURINARY THERAPEUTICS

### PHIMOSIS AS A CAUSE OF CONSTIPATION

That phimosis is frequently a cause of disturbances in the genitourinary system is well known. But that it may cause troubles in other organs besides the genitourinary is not so well recognized.

Dr. Witzhausen (*Muench. Med. Woch.*) reports a number of cases in which a narrow prepuce was the etiologic factor in the constipation of infants. The constipation was relieved on the performance of circumcision. He explains the causation of constipation by phimosis as follows: As a result of the narrowing of the preputial opening urination is rendered difficult. The bladder is therefore imperfectly emptied and is often overfilled and dilated. The enlarged bladder crowds upon the pelvic organs, presses upon the rectum and as a result we have constipation. The immediate and remote disturbances caused by phimosis if neglected become serious and persistent and may require a long time to subside, even after the initial etiologic factor, i. e., the phimosis, has been removed by circumcision.

### SYPHILITIC AORTIC DISEASE

It seems from the investigation of Bruhns that many children are born with syphilitic disease of the blood-vessels, especially the aorta. He made serial sections of the entire

length of the aortas of nine congenitally syphilitic children. Eight of these were still-born or died shortly after birth, and one had lived to the age of three months. The vessels showed no gross lesions, but pronounced changes were discovered in the microscopical preparations in six of the cases. He concludes that in congenital syphilis areas of inflammation occur, situated in the outer layers of the media and in the adventitia, especially in the neighborhood of the vasorum. These inflammatory foci correspond closely to those described by Chiari in acquired syphilis as productive of mesaortitis. The discovery of these changes in congenital syphilis, therefore, indicates that productive mesaortitis is to be regarded as a manifestation of syphilitic disease in the aorta. The lesson is to institute immediate and active antisiphilitic treatment in every child presumed to be affected with syphilis—or, better, energetic treatment of the mother during the last few months of gestation.

### SYPHILITIC ORCHITIS

Syphilitic orchitis causes a growth of the testicle, sometimes so rapid as to cause suspicion of sarcoma or carcinoma. Unless the diagnosis of malignant disease is quite positive the patient should be subjected to vigorous antisiphilitic treatment for some weeks before removal of the testicle is undertaken.



# GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



## WHY AND WHEN I BECAME AN ALKALOMETRIST

The story of "The Gleaner", the oldest, handsomest (see the next page) and best-loved of the entire editorial staff of Clinical Medicine

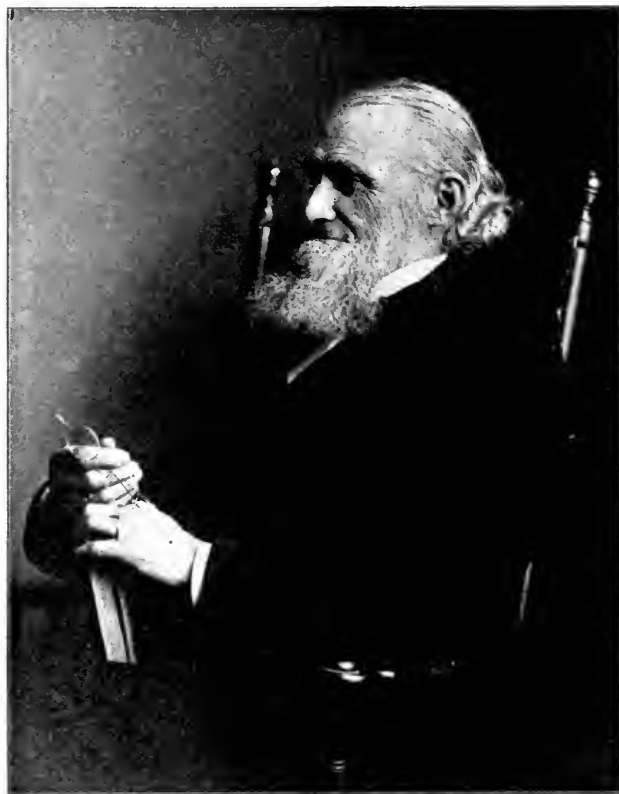
I AM reminded on this occasion that this month, twelve years ago, I wrote my first article for THE ALKALOIDAL CLINIC, and that I have been favored, providentially, ever since, to write one or more articles for it and its successor THE AMERICAN JOURNAL OF CLINICAL MEDICINE, almost every month. A friend and generous patron during my early struggles, in New York city (where in the early fifties of last century, I was striving to get a medical education in the medical school of the University of that city, graduating from the medical department of the College of Physicians and Surgeons, now the Columbia University), impressed upon my mind the advantage of dispensing my own medicines, even though it be with my pen-knife blade as a powder measurer. And that friend, long since gone to his rest and reward, was a highly educated man. My practice in different parts of the world and on sea in the Austrian Navy, in 1866, during its war with Italy, made me quite familiar with medicaments and self-dispensing.

Early in the nineties of the last century, when practising in West Liberty, W. Va., *The Medical World* of Philadelphia directed my attention to the medicinal alkaloids then sold by The Metric Granule Company, Chicago, Ill. The idea was to me a realization of a long-cherished hope and desire, to have all medicaments reduced to their active

principles, the same as we have them in morphine, quinine, strychnine, atropine, etc. For a while I got that part of the alkaloidal granules which I adopted in my practice from the firm mentioned above. I became more and more satisfied with the greater efficiency of the alkaloids above the plant powders, tinctures, extracts and pills. I do not recollect by what occasion the first and second number of THE ALKALOIDAL CLINIC, of 1894, came to my hands, but it at once riveted my attention to the dosimetric method of using the alkaloidal medicaments. An eclectic physician in a neighboring town also became acquainted and pleased with the alkaloidal granules and comparing notes with him when we came into one another's towns, we conversed about the remarkable efficiency and convenience of those granules. He got his granules from The Abbott Alkaloidal Co., of Chicago, and was highly satisfied with them. I then concluded to subscribe for THE ALKALOIDAL CLINIC, and got with it, *gratis*, that well-known pocket case with 9 vials, each filled with one hundred alkaloidal granules. I selected aconitine, digitalin, hyoscyamine, codeine, strychnine arsenate, glonoin, brucine, morphine sulphate and veratrine.

Soon after using the granules and the effervescent saline laxative, I had occasion to visit Chicago and there I made acquaintance with Drs. Abbott and Waugh. My practice be-

came more and more satisfactory to myself, because more and more so to my patients. Not only was the handling of the medicaments more satisfactory, but more so the certainty and efficiency, through the method of giving small doses, often repeated, till effect. I never was a mere expectant practitioner, and always had a reasonable confidence in medication, but never was I so certain of myself as after I became thor-



DR. E. M. EPSTEIN

Our editorial Nestor—long may he stay with us.

oughly acquainted with the method which the originator of it denominated "dosimetry," and which I redenominated "alkalometry."

There was also an ethical attraction for me in alkalometry, in the way Dr. Abbott inaugurated it in this country. Its own decidedly antisectarian character and his refusal to make of it a medical school, secured my warm affection for it. In alkalometry

we are introduced to our own time-honored and well-proved practice of the ages, with the only happy difference of greater certainty and efficiency. More than ever I felt that I was right in pronouncing the modern disparagement of medicine and medication, in certain strata of society, as nothing less than ignorant vulgarity. More than ever I think and feel to this day that nihilism has no more reason for its existence in medicine in the presence of alkalometry, than it has in the commonwealth in the presence of government by the people and for the people. And do-nothing expectantism in medicine, in the present presence of alkalometric facilities, is to my mind but little short of fraud, pretension and criminality.

With these ideas in my mind I pursued my arduous country practice till the latter part of November, 1898, when I was disabled by a fearful attack of a diabetic storm. I was fortunate enough to have cured, not long before this, a case of chronic diabetes mellitus, but this sudden acute attack of it on myself thundered mockingly at me, "Physician heal thyself!" I was in excruciating pain, but in my right mind and just on that account did not trust my case to myself exclusively, but left it to Dr. J. R. Caldwell and Dr. J. Schwin, both of Wheeling, W. Va., myself directing that the cor-

responding alkalometric granules be substituted for whatever galenic preparations were agreed upon by them.

The case is fully reported in *THE ALKALOIDAL CLINIC* of 1899, June and July. There are some points in that case and its management which I think instructive enough to recommend their perusal. The recent discoveries of pancreatic affection in connection with diabetes leave no doubt in

my mind that my acute sufferings then were directly due to an inflammation of the pancreas.

Very gradually the pains mitigated, but many months passed before I regained my former strength, so as to resume my country practice. Convalescence was very slow and I lost some thirty pounds in bodily weight. A change of air was thought advisable and on the kind invitation of Dr. Abbott I came to Chicago, where I am ever since in the service of a work in which I am willing to remain so long as earthly life remains in me. It is not in place here for me to speak of my humble share in the promotion of the alkaloidal therapeutic work, but I cannot refrain just here from giving my profound thanks to Dr. W. C. Abbott for enabling me to enjoy that share, whatever it be.

With sincere blessings on him and all his coworkers and the grand cause of alkalometric therapy, I remain as ever,

Faternally yours,

Ephriam M. Epstein, M. D., A. M.

Ravenswood, Chicago.

## HELENIN AND ITS THERAPEUTIC USES

Ever since Germain Seé has demonstrated the great advantage which accrues from the uses of medicaments that are simple, crystallized, of definite composition, whose action when seriously studied and carefully determined proves to be always the same, many new medicaments have been discovered and extolled. A great number of them, it is true, have been in vogue but ephemerally, yet some of them have taken solid root and have preciousy enriched our pharmaceutic arsenal, among which is counted helenin, which occupies an important place because its therapeutic value is incontestable.

Helenin is a solid body, crystallizing in quadrangular, colorless prisms. It was first isolated in 1880, by De Korab, from the camphor or essence of inula campana, popularly known as elecampane, of which it is one of its three principal constituents. It was the object of its discoverer's and other physicians' many researches, clinical as

well as physiological, carried on in France and other countries.

One of the most remarkable properties of helenin is a notable reduction of laryngopharyngeal excitability. (*Soc. de Biol.*, May 13, 1882). Helenin is therefore one of the best medicaments for quieting cough; it will stop the most rebellious cough paroxysm, dry up expectorations the most abundant, and palliate much asthmatic dyspnea. When ingested it exercises a high degree of stimulating action accompanied by a marked diminution of vascular tension and a lowering of temperature, phenomena which were rigorously studied by means of Prof. Marey's apparatus. (*Soc. de Biol.*) From these physiologic properties it was readily deduced that it would be useful in the treatment of pulmonary congestions and to prevent hemoptysis, and these effects have been well demonstrated in clinical experience. Helenin acts remarkably against pulmonary congestions, and its effects are useful also in cases of ulceration and even in cavernous cases when the purulent breath of broken-down tissues (in phthisis) makes us fear the rupture of some blood vessel which has become too thin to resist the pressure of the blood current.

Helenin affords the further advantage of being ingested without irritating the stomach. It stimulates the appetite like the aromatic bitters, and is an aid to digestion in phthisical patients who suffer from obstinate anorexia.

As a powerful microbicide this body has a sterilizing action on Koch's bacillus (*Acad. des Sciences*, Sept. 4, 1882). De Korab proved this as early as 1882, and in 1885 Pillatte verified it and in a Montpellier thesis remarked that a minimum quantity of helenin sufficed to hinder the development of the bacillus.

We must not forget also that helenin is eliminated very rapidly by way of the respiratory passages and it is this fact that explains its topical action on the bronchial mucosa and pulmonary parenchyma (*Congress Internationale de Therapeutique*, 1899).

Summing up the above we would say that the properties of helenin fully justify

the opinion put forth by the distinguished clinician, Vindevogel, in an article of his in the *Confraternite Medicale Belge*, where he says that we are to congratulate ourselves on the introduction of helenin in modern therapeutics.—(*Gazette des Hôpitaux*, 1907, p. 1557.)

[The GLEANER wishes to tell the readers that helenin is fully described in our "Text-Book of Alkaloidal Therapeutics." He would be thankful to anyone who may have occasion to use it during this winter to report in THE CLINIC whatever good or ill success he may have with it. "The proof of the pudding is in the eating."]

#### CURE FOR MERCURIAL STOMATITIS

Honest and experienced physicians the world over acknowledge the indispensability of mercury in some diseases, especially in syphilis. But equally true it is that mercurial stomatitis will sometimes occur whether we use mercury in excess or in cautious moderation, after a protracted course or at the start. Then comes the necessity of interrupting the mercurial treatment with usual restrictions of diet and smoking which hinders the success of the treatment and is always irksome to the patient. To obviate all these Dr. P. Meiszner of Berlin recommends very highly the use of formamint not only when the stomatitis had occurred during a mercurial cure, but also to prevent it. Meiszner observed a number of cases of mercurial stomatitis which were treated with formamint and were cured without interruption of the mercurial cure. He is of the opinion that the use of formamint tablets in mercurial cures will most likely prevent the occurrence of stomatitis. He administers, however, only five grams (grains 75) of mercurial ointment a day, or never more than one cubic centimeter of a 2 percent solution of corrosive sublimate twice a week, and though giving formamint he is careful to have any carious teeth of the patient's removed and any sharp points filed off and smoothed. Habitual smokers he does

not prohibit smoking but only directs them to lessen the quantity, and he advises smoking cigars through a holder, so as to prevent any possible cauterization with tobacco juice. The formamint tablets are given in hourly intervals so that ten or eleven a day are taken. Morning and evening, and after every meal, the mouth is washed out with a solution of aluminum acetate, or peroxide of hydrogen.—*Ther. d. Gegenw.*, 1907, No. 7, in *Pharm. Centralhalle*, No. 38, 1907, p. 793.

[The composition of the formamint tablets is given in Peters-Haendel's *Neueste Arzneimittel* as follows: One centigram of formaldehyde, with milk sugar and menthol, with pepsin and hydrochloric acid, and citric acid as a taste corrigent.—GLEANER.]

#### ANAM ULCER

There is a peculiar ulcer common in the tropics (first noted in Anam): a phagedena which begins as an inflammation at a small abrasion of the skin, most often on the leg or foot, soon followed by deep sloughing of the inflamed area—resulting in a sharp-cut ulcer which slowly enlarges, always preceded by the inflammation. It is exceedingly obstinate to treatment.

Fluid extract of lobelia.	32. (oz. 1)
Fluid extract of baptisia.	32. (oz. 1)
Zinc sulphate.....	32. (oz. 1)
Water .....	500. (ozs. 16)

Of this mixture one ounce to the pint of hot water is used in a douche-bag, carefully irrigating once daily. Dress with gauze saturated with a mixture of camphor and phenol, equal parts. Internally iodides or mercury—the trouble is often syphilitic.

#### PERTUSSIN

A valuable cough remedy, consisting of extractum thymi saccharatum, which is a fluid extract of German thyme mixed with simple syrup in proportions to equal an infusion of 1:7. An excellent remedy against whooping-cough, given in one to four teaspoonful doses every one to two hours.



## FRENCH NOTES ON ALKALOIDAL TREATMENT

Being some practical suggestions on the treatment of different types of dyspepsia, with some general observations of the dosimetric method of treatment, as it is seen by French thinkers

By THOMAS LINN, M. D., Nice, France

**D**YSPEPSIAS.—As the Americans are a dyspeptic nation, we commence with this subject. Castro said that "it was a difficulty of digestion." No doubt, but it occurs in all sorts of diseases, and some have said that there was no real dyspepsia but only dyspeptics! Bouchard, in France, insists that it is always attached to dilation of the stomach. In any case, those who suffer from it, desire to digest, if they can, without pain, and this symptom is the most important one to the patient.

It is possible, of course, that it may have been caused by too much alcohol, or again by too strongly spiced foods. Then there is the large class of big eaters and drinkers that have it, as well as, curiously enough, the poor fellow who has dyspepsia because he can get almost nothing to eat!

We shall not dwell on the many maladies that are factors in the etiology of the trouble, but hasten to say that the French dosimetric doctors define the condition as "a functional trouble that prevents perfect digestion."

*Treatment for Buccal and Stomachic Dyspepsias*

The complex digestive function is so varied that, of course, the treatment must be according to symptoms and cause. First of all, we must realize that digestion

commences in the mouth and this buccal dyspepsia may be and often is owing to insufficient mastication or an insufficiency of the salivary-glands secretion. In such cases it is well to give three granules of diastase at each meal, and while it is not a "regular" drug, it has an excellent effect in these cases. To this must be added, two hours after the meals, three granules of nitrate of pilocarpine.

As to the second form of dyspepsia, the stomachal, it is sufficient to mention sulphate of strychnine, three granules before meals, or brucine, according to the case; while elaterin and euonymin, as many as five granules of each, should be given after food; and we add to this massage and often electricity, as well as some hydrotherapeutic methods.

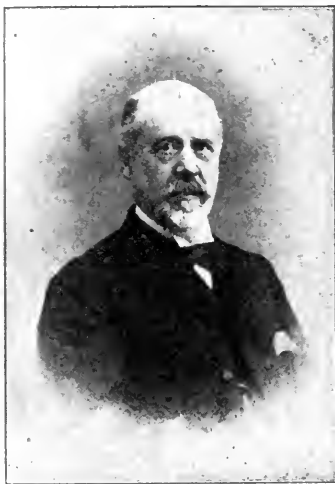
Hyoscyamine has an excellent effect in all cases of vomiting or nausea, and we may give with it a granule of strychnine.

*The Treatment of Intestinal Dyspepsia*

The third form of dyspepsia, the intestinal, most often comes from an insufficiency of pepsin to digest the proteids, which stay too long in the organs and cause fetid gas. This calls for pepsin as well as for pancreatin, and a few drops of dilute hydrochloric acid after meals. I also use salic-

ylate of quinine, and also a few granules of iodoform in these cases. In colic, cocaine and codeine come in nicely and in the acid cases, with heartburn, sodium arsenate and sodium salicylate are given, as well as a largish dose of simple sodium bicarbonate, as much as a teaspoonful in a glass of water *once a day* only an hour after dinner.

When there is great pain and an evident gastralgic form, the cannabine tannate,



DR. THOMAS LINN

An **American** physician, long a resident of France.

hyoscyamine and codeine, or morphine is needed. When there is no appetite I give quassin and piperine, two granules of each before meals. Of course we always add seidlitz (effervescent magnesium sulphate) daily to get rid of the stagnation of the alimentary residual matters.

In a very serious case of albuminuria that followed an operation for appendicitis, after various treatments were tried, it was found that large doses of strychnine arsenate, iron arsenate and tannin cured the case.

#### *What is Dosimetry?*

Dr. Marty, in a recent article, asks the question: "What is dosimetry?" Burg-graeve said: "Diagnosis is a very fine thing, if it is completed by a good treatment." He laid down one, and for years

it was secretly used by many doctors, as they found that it gave them a sure method of treatment as well as remedies that are agreeable to take. Today, after thirty years have elapsed, dosimetry has penetrated into the highest circles of medicine in Europe, and is having an equally great success in America and many other countries.

The great Ghent professor is now getting renown—after his death! Dosimetry or the alkaloidal method is based on the vitalism of Hippocrates himself, what Barthez called "doctrinal." This principle is different from the soul and the organism, and is really a vital fluid or force outside of matter, and is life in its highest conception, and this is the most rational as well as the oldest theory known.

The next is "experimental," and this is a dynamic force—so-called by Claude Bernard.

The dosimetric method has come to a special conception of disease, that allows it to fix the general rules of therapeutics under the dual condition of diathesis and symptoms; and the treatment follows in all the acute and chronic troubles according to their dynamic origin.

The dosimetric physician considers hyposthenia the first of the dynamo-vital morbid troubles of the living cell, in its protoplasmic, nutritive or eliminating changes, in its contractile movements or its relaxation—which is the principal cause of pain of a spasmodic character. Le Grix says that this is the true point of departure of the dosimetric doctor, as he thinks disease is a modification of this dynamic action, and our therapeutics is an effort to reestablish the physiological equilibrium.

Just as the words, "dose" and "measure," mean to solve the problem of the alteration of the changes in the system, so the dosimetric doctor is to measure out the "dose enough" to bring the system to its normal action, according to the nature of the disease, the constitution of the patient and the active nature of the drug used.

Prof. Grasset, of Montpellier, says that "One can see by the action of drugs that



the vital property of the organism is worked upon, and their action is explained, by just this vital action of the economy."

### SOME REMINISCENCES OF AN ALKALOIDAL CRANK

Possibly it would be well to give just a few details of the writer's earlier life, leading up to the above sobriquet.

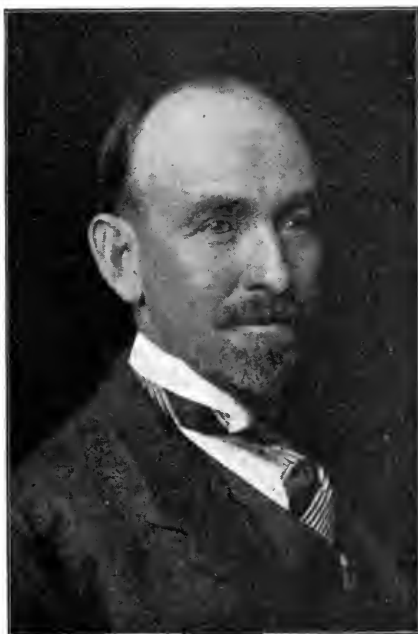
My father, grandfather and grandmother were physicians, so it may be that I inherited some medical instincts. Be that as it may, I migrated from the farm to the old State College of Kentucky in 1889, being impressed with the idea that my vocation was that of physician rather than farmer. For four years I pursued the classical course with the aim of preparing myself to enter a medical school. Finally, 1893 found me in the Kentucky School of Medicine. From there I went to the Louisville Medical, where I took an unofficial course, graduating in June, 1894.

Then came the real earnest work. I entered upon my life's task with a pair of old-fashioned saddle-pockets across my shoulders (the cost of which was \$5.00, borrowed money). These same saddle-pockets when opened filled the room with an aroma very much akin to that of a country drugstore. They contained morphine, calomel, quinine, paregoric, syrup of squill, Dover's powder, ipecac, lobelia, croton oil, chloroform, various pukes and purges, and possibly other things.

With this array I went forth with the light of the moon by night and the gray of the early dawn to treat my patients—and expect them to get well! To cure them, never! So we had been taught, since nearly all diseases were self-limited affairs; and true to the teaching, in the first year of my practice four of my little patients were nailed down by the undertaker, the cause of death being cerebrospinal meningitis. Now, in all fairness to my former teaching, *did* we have any reason to expect this disease to yield, the symptoms to abate, under our old galenical remedies?

About this time, the work of Dr. Burggraeve of Ghent was called to my attention,

introducing dosimetric medication. This active-principle idea of small, measured doses, often repeated, in sharp contradistinction to the old galenical idea of large sledge-hammer doses (regardless of age or condition), four to six hours apart, made a strong appeal to my better judgment. The trouble with galenicals seemed to be that they only met the indications in a very small number of cases. The large, heroic doses of powders, fluids, extracts and tinctures, considered logically, seemed to me to stand



DR. S. D. WETHERBY

One of our many warm Kentucky friends.

at one extreme, while to a nonsectarian, homeopathy, with its infinitesimals, seemed at the other.

Here, then, the alkaloidal method of practice seemed to occupy a happy medium, for "dose enough, and to effect" is our motto. By twelve years of hard, persistent effort, trying to induct my professional brethren into the better way, I have gained the notoriety of being called an "alkaloidal crank."

"What's in a name?" I surely do not adhere to authority and treat a disease by

name, but rather meet the conditions in the case and treat my patients. Every case is a law unto itself. I might begin in an alphabetical way and ask, Is it ever justifiable to perform abortion? Seldom, if ever. I have been prevailed upon by good women in my earlier professional life to help them out of trouble, but later concluded it were better for their troubles to be mostly "little ones." Now, when in the course of events these



DR. WILLIAM AYRES

Of Brierly Hill, Staffs, England. His article "coming" didn't come, but we are glad to show the face of this able English "alkaloidist" and will give you his article later.

little ones have an attack of croup, I give calcidin, gr. 1-3 to gr. 1, every fifteen to thirty minutes. Well, suppose, it is membranous croup, what then? Same treatment; calcium sulphide to saturation; brucine and hyoscyamine if needed. I have had only one fatal case of membranous croup since beginning the use of active principles. This patient I saw in consultation after the other physician had used the old-time remedies for four days and nights. I have always believed the girl would have gotten well but for the "old lady" that's

always on hand. She put this child to sleep with Morley's cough drops, and she never woke.

Diphtheria is another child's disease I sidetrack when possible. Antitoxin given early is possibly better than our active principles. But in the absence of antitoxin I have seen this disease yield to the persistent efforts of the alkaloidist. Calomel, saline laxative, intestinal antiseptics, nuclein, calcium sulphide to saturation, aconitine, digitalin, are the agents employed. No death to date.

November 11, '07, I called to see a child seven years old, suffering from whooping-cough. Pulse 120, temperature 102°F. November 12: Pulse 130, temperature 103.8°F. Prune-juice sputum. Pneumonia and whooping-cough. Treatment: Calomel, podophyllin, saline laxative, calcium sulphide, monobromated camphor, quinine hydroferrocyanide, aconitine, digitalin, strychnine. November 15: Pulse and temperature normal. Patient discharged. I have never yet met defeat from pneumonia occurring in the white race. My mortality to date has been three colored women only. All three died on the seventh day of treatment.

I lost my first patient from typhoid fever November 6, 1903. For this fatal case I prescribed one hundred intestinal antiseptic (W-A) tablets. I was so sure this patient was not taking his medicine (in the face of statements that he was), I counted his tablets after his death and found only thirty-three had been taken, when according to directions he should have taken 180 of them at the lowest calculation. I have never been so unfortunate as to meet with a hemorrhage in typhoid fever, in my personal practice.

In the treatment of rheumatism I have tried to prevent my patients from becoming chronic invalids. Salithia, calcalith, aconitine, digitalin, macrotin, phytolaccin, strychnine and veratrine have served me well. I have one patient today walking about, his knees both a little swollen and stiff. He is doing his work and is on the high way to recovery.

In cholera infantum I have always won the day. Calomel and castor oil to clean out with; saline laxative to keep the intestinal tract clean and neat; zinc, lime and sodium sulphocarbolates for intestinal antiseptis; the withholding of all food as long as needed to accomplish results: and I have seen all my patients so far get well.

From ileocolitis I have seen three children die. And in my opinion all three deaths were brought about by overfeeding. The first was fed green-apple pie. In the second case the mother would not let the baby sleep but persisted in waking it up to feed it. The third had a severe attack of cholera infantum from which it recovered. Then this child was driven about twenty miles through the country in a buggy, when the sun was as hot as blazes. The mother told me she did not feed it—she was not nursing it—so I drew my own conclusion. The great wonder is, therefore, not that so many infants die from bowel trouble, but that so many of them live, in spite of what they are fed.

From my own individual experience I am forced to believe that sometime there will be discovered, either in the vegetable or the mineral kingdom, a remedy for every disease flesh is heir to. It's up to us today, as physicians, to become better diagnosticians. Delve deeper into nature's laws and secrets.

Emerson it was who said the greatest study of man is man himself. Dr. Burggraeve, the father of alkaloidal medication, carried out this idea. Practising his profession until the day before his death, he lay down a wornout man, with no disease apparent.

Dr. Shaller of Cincinnati, in 1895, published a "Guide to Alkaloidal Medication," which contains essays on thirty or more different remedies. Not all the medicines used in dosimetric medication are alkaloids. Among them are found resinoids, glucosides, acids, salts of various chemical combinations, and other substances. I once heard a professor of thirty years' experience ask the question how I could give the strong, dangerous active principle aconitine to an

infant. Shaller's "Guide" is so plain upon this subject "that a fool, though a way-faring man, may not err therein."

What has alkaloidal medication done for the writer? It has lifted him out of the chaos and uncertainty of galenical preparations and placed him in the light of scientific truth. What have I in twelve years of hard work and persistent study dug out of alkaloidal medication? One word will answer: Success. Have I been benefited by this constant devotion to active-principle medication? I am today truly in love with medical science. As a philanthropist I believe in doing all in my power for my fellow man, knowing at the same time that what's hardest to obtain is most readily paid for.

I am tired and disgusted with doctors complaining of hard times and no pay, when these same good fellows are wasting their time running for political offices, working teams upon the public highways, abusing their brother practitioners for getting their patients, and all the while practising medicine as a sideline or secondary consideration.

The study and practice of medicine demand a man's whole time, all of his energies, and then, unless he lies awake nights thinking of some patient seriously ill, he will be found following blind authority. Let's wake up and develop the resources of medical science. The reason our patients run off to the surgeon is because we have nothing to offer them in the way of good treatment. In gallstone colic, for instance, the surgeon says there is nothing to be done but to cut 'em out. I say to you, and most emphatically, give the great antispasmodic triad, glonoin, hyoscyamine and strychnine arsenate, and watch the colic disappear. Give your patient succinate of sodium three times a day persistently for years, and if you are skeptical, ask your patient if he would rather have this treatment or be operated upon. None of mine thus far have been cut, and as a personal proposition, I intend to be as kind to my own gallstones as they have lately been to me. When they bother me too much, I'll have them cut out, not until then; and what's best for me, I consider best for my patients.

I am today the happy possessor of an ALKALOIDAL CLINIC, of the month of April, 1895. The cover contains this statement: "This is a sample copy, we want your subscription." When a man wants a thing and goes after it, he generally succeeds. Dr. Abbott got my subscription to the CLINIC when it contained about fourteen pages of reading matter. He has been from that day to this good hour the American Champion and Exponent of Alkaloidal Medication. No doctor knows how this idea has grown, developed and expanded except the one who has kept in close touch with active-principle therapy.

Dr. Abbott has given to us the greatest antipyretic known to the medical world, namely, amorphous aconitine. He has given us calcidin, a specific in spasmodic and membranous croup. We are indebted to Drs. Abbott and Waugh for the greatest combination of intestinal antiseptics ever used in typhoid fever. He has given us brucine, the weaker alkaloid of nux vomica. He has given us pilocarpine, a specific in sthenic erysipelas. Why use the pilocarpus and run the risk of killing your patient with jaborine, a remedy not indicated? This proves to a thinking doctor that the galenicals, like their teachers, "have been weighed in the balance and found wanting." Another good thing that Dr. Abbott has given the medical profession, is calcium sulphide. The only time I have been disappointed in treating whooping-cough was when I prescribed Abbott's 1-6-grain granule of the above remedy and an unscrupulous Louisville druggist substituted another preparation—just as good (?), and let my patient die.

After practising in the noblest profession on earth for six years it was my misfortune to get sick myself. We all have our ups and downs. Mine was principally down for three long years, flat on my back a goodly part of the time. After receiving treatment from a dozen of my best professional friends all this time, I thought I had about run the gauntlet when I called in the unlucky surgeon, No. 13. He did his best in dilating my sphincter ani, which operation controlled my trouble or held it in abeyance

for some time. Soon, however, my old trouble returned. I passed blood from my bowel from ten to twenty times a day. In all deference to my Kentucky friends, I could never get a clear-cut diagnosis. I was like the woman of Holy Writ, who "suffered many things at the hands of many physicians," and I believe they will tell you today that my nerve was all that kept me up. From a strong, healthy athlete of 147 pounds, I went down to 123 pounds, with two overcoats on. The only diagnosis ever heard in my own case was "consumption of the bowel." I laughed at this, sick as I was. When I asked permission to go to Chicago, I was told I could not go there and back alive. But let me say, I went, and did not stand on the order of going. Once in Chicago, I met the men I had tried to keep up with for years, namely, Drs. Abbott and Waugh and another good brother, Dr. H. C. Bernard, of Charleston, Ill. These men put their heads together, gave me a diagnosis of "congested liver," treated me along active-principle lines, and today I can only say, my gratitude was not an acute symptom, but through the hard knocks of these seven years, I have never forgotten the kindness rendered me, through this misfortune of mine.

It does seem to me we have been drawn closer together and cemented by the ties of professional love. Dr. Abbott, to my mind, has done more for the profession of the United States than any man alive today. He is the ideal business doctor. Dr. Waugh, in my honest and humble opinion, is our greatest living American clinician. Are they infallible? I would say not. "It's human to err," but the greatest error has been committed by unjust criticism. It requires no brains to criticise, but surely it does take a certain amount of discriminating judgment and common sense to find the gold and refuse the dross. Personally, I believe Dr. Abbott to be honest, upright, a man of keen business acumen, far more honest than the average professional man and with more integrity than most men will ever be able to attain. Render therefore unto Cæsar the things that are Cæsar's.

Hasten the day when medical men will open their eyes and use at least common sense in their practice, using as their ethics the Golden Rule, "Do unto others as you would be done by," rather than do every man you can. I believe in standing for what has been tried and proven, and in doing this we can do it in the spirit of kindness, without the fear or favor of any man.

mouth Medical College, class of '84. Practised in Connecticut a few years. Fifteen years ago I returned here as my father was very feeble. He died the following May. Here I have practised medicine and carried on the farm (after a fashion) ever since. Have been a subscriber to the CLINIC since nearly the first issue, and have used Abbott's alkaloids nearly as long.



THE HOME OF A NEW HAMPSHIRE DOCTOR

A pleasant place, such as "our boys" all should have, among the New Hampshire hills.

If error creeps in, it will die a natural death.  
"Truth crushed to earth must rise again."

Boys flying kites haul in their white-winged birds;  
You can't do that way when you are flying words.  
Thoughts unexpressed fall back to earth as dead,  
But God himself can't kill them, when they are said.

S. D. WETHERBY.

Middletown, Ky.

#### A NEW HAMPSHIRE DOCTOR'S HOME

The house pictured was built by my father over fifty years ago. It is made of stone, but the ivy leaves hide it through the summer, so the picture does not show the material. I was born here over forty-seven years ago, graduated from Dart-

I have done nothing brilliant in any line. Am in the class with the man who had "neither lost nor won, nor hardly held his own." Was in Chicago November 1 last year, on my way to California. Arrived too late the night before to get a train west so had to wait twenty-two hours. Being a stranger and having my family I did not get my bearings so as to visit you, which I should have been pleased to do. Stayed in California all winter. If I ever get another day in Chicago, shall try to find you, and you may rest assured that the latch-string is out to any of you who may stray into New Hampshire.

WM. RICHARDSON.

Londonderry, N. H.

[Next time you come to Chicago don't pass us by. And if we ever visit "old New Hampshire" and come within speaking distance of Londonderry, you can count on a pull at the latch-string. Your home looks "like home." How we would like to see it, and you, as well as lots of others of "our fellows," east, west and south. Remember that *our* latch-string hangs ready for all of you.—ED.]

### A CASE OF CYSTITIS

A case of purulent cystitis, recently occurring in my practice, illustrates to me so nicely the advantage of the alkaloidal granules, over the tinctures, fluid extracts, decoctions, etc., that I deem it worth reporting.



DR. TORGNY ANDERSON

A middle-aged lady had suffered from cystitis for three months and was getting worse every day on account of her inability to retain the medicines given. This was not the fault of the kind of drugs given but of the form in which they were administered. Buchu, copaiba and uva ursi were given by the attending physicians preceded

ing me. But she vomited up every dose. I was called in because the lady had heard of a cure where I had operated for the same sickness (caused by a large concretion around a hairpin). When I arrived she told me that it was useless to give any medicines, as she would not take them.

After an examination, confirming the diagnosis of the other doctors, I told her that before I could operate I would have to put her bladder in a more aseptic condition. Consequently I ordered the boric-acid injection continued and left three envelopes containing arbutin, gr. 1-6, barosmin, gr. 1-6, and antibleorrhagic No. 2, telling her to take two pills of each kind every two hours with a large cupful of hot water every two hours. I returned in two days and finding her greatly improved ordered the same treatment continued, adding lithium benzoate one grain, two tablets four times a day. The boric acid irrigations were continued also.

One week later I told the lady that no operation would be necessary and that the treatment she was now receiving would be all she would need. And it so proved, for in six weeks the lady was entirely well and rapidly gaining in strength and general health.

TORGNY ANDERSON.

Ceresco, Neb.

### FADS AND FANCIES

Here are some of them: Faulty metabolism, autointoxication, sepsis, opsonins, ptomaines, ions, bacteria, cell-proliferation, nervous prostration, serotherapy, dosimetric therapy, alkaloidal therapy, bovine, nuclein, antitoxins, electrotherapy, balneotherapy, et cetera, and so on.

1. Faulty metabolism. This, like many other medical terms, sounds big, but does it mean anything tangible? What do you suppose constitutes faulty metabolism? It simply means that the usual functions of the body are not performed in a way to keep the patient well. It means that something, somewhere in the make-up, has gone wrong. It may be caused by anything

imaginable or unimaginable. So you see that when I tell you that you are suffering from faulty metabolism I am so distant from anything tangible that I might as well have told you that you are not well. The average patient (or doctor) understands that faulty metabolism indicates something wrong, somewhere. To tell a patient that he is not well signifies the same thing.

2. "Autointoxication". (Now I am on dangerous ground.) This is a fad on which our good editor has much to say. He can tell you more about it and how to relieve it than any other forty-seven doctors in the country, except those who copy from him. Now, what does autointoxication mean? Simply that the patient is poisoned by faulty metabolism. Is that a definite definition? Yes, but not satisfactory. To the editor it simply means—stomach and bowels loaded with filth which ought to be removed; but the good editor is very silent as to why the stomach and bowels are loaded with filth. He may explain that they are atonic, but why atonic? What caused the atony? Is there not something behind the atony? behind the faulty metabolism? Eh, what did you say? Say it louder. What caused the atony? Now don't go to guessing. I would say, because the patient eats too much of the wrong kind of food, but faulty metabolism exists in patients who are not eating too much of any kind of food. What about these? I realize that it is much easier to ask questions than to answer them, but there is certainly a cause for autointoxication, and if the cause were removed it would not be necessary to dope the patient with calomel, podophyllin, etc., to be followed by salts, sulphocarbolates and so on.

Now if you can "put us on," do so; but it will spoil your drug trade and this is asking too much of you. It would be a pity to spoil as good a thing as you have in the autointoxication fad. But like all other fads it will sooner or later go to the wall. Purgatives (like the lancet), tartar emetic and heroic doses of opium, are of only temporary use and should be replaced with something less injurious. It requires some wear and

tear on one's system to eliminate alkaloids. They cannot be harmless and yet do what you claim for them, especially in the hands of the inexperienced.

Now, this is a rainy day and I utilize it in again tantalizing you. Take it kindly. If I could do what you are doing I would. So you see I am not condemning you. If you can use this, all right; otherwise throw it away.

W. C. HOWLE.

Charleston, Mo.

[Read with interest as well as amusement. Of course you are right—in spots—and much obliged to you for giving us the opportunity to set this matter before our readers. Back of autointoxication is the question of *why* it exists; atony of the bowels, surely, but why should there be atony?

The reason for this is not always the same in all instances, however; in a good many cases it comes not only from the sort of food which people take, but from neglect of the habitual attention which the bowels absolutely require, the use of foods not sufficiently stimulating to the bowels, and sedentary life; the concentration of the attention on business and other intellectual matters and neglect of exercise; and besides this that tendency, which everyone of us who has passed the middle mile post of life observes in ourselves and in others, to a relaxation of tone in the alimentary canal and a lessening of the sensitiveness of its surface, which induces action. This is a necessary consequence of age, and as yet we have no remedy for age, although Metchnikoff does say that such a remedy exists in sour milk. Possibly he is right, and we ought all of us to begin taking a goodly modicum of sour milk every day of our life, that is, after we have passed the fiftieth year, when youth may be said to cease and middle age to loom in the near distance.

If you will look over the remedy which we recommend you will find that it is not aimed at the autotoxemia so much as its causes. Take the formula which has proved most popular with the profession, that of the "anti-constipation" granule. If you will take this

up and ask yourself the reason for the use of each of the ingredients you will find that it replies precisely to the question you ask. As to the cause of the autointoxication also, it goes further than this, for it applies the remedy.

We look upon the questions that you have asked as exceedingly interesting, so much so, in fact, that we refrain from further consideration of them here, in order to induce our readers to take the matter up and themselves supply what they will quickly see to be lacking in our explanation. We are glad to hear from you again and hope you will come back at us. Good sensible talk along this line is always acceptable to the journal. Your remark about the reply interfering with the commercial interests, I take exactly as it was meant, as a joke.—Ed.]

#### AUTOMOBILES: WHO IS THE AUTHORITY?

Will the members of the CLINIC "family" who have had experience with automobiles kindly give me their experience and advice in selecting a machine for use in my practice? I desire advice relative to the Doctor Maxwell two-cylinder, 20 H. P. Runabout, also the Rambler Runabout, the Holsman and the International Auto-Buggy, as representing the high-wheeled class of air-cooled motors.

Is the air-cooling successful and practical for physicians' use and is it to be preferred to water-cooling? I want a machine that has ample power to negotiate our hills and sand as well as mud. I have tried a light runabout with double V-shaped motor on rear axle, but it is not capable of doing my work. Thanking in advance all who are kind enough to write and advise me.

J. H. HUNT.

Glendive, Dawson Co., Mont.

[This is "all Greek to me," and I am afraid even to try to answer Dr. Hunt's questions, for so many of my friends have commenced to dabble a little (around the

edges, as it were) with autos and motors and such things—and *they* were lost! Hopelessly insane! But there are doubtless many readers of CLINICAL MEDICINE who can tell all about air-cooling and water-cooling, two-cylinder and four-cylinder machines—and all the other things of automobile interest. Why can't some of you write up these points for CLINICAL MEDICINE? A whole lot of you will want to be buying automobiles next spring.—Ed.]

#### EXAMINATION OF THE SICK CHILD

That some men are born doctors, many are made doctors, and quite a number "die a bornin'" or are spoiled in the making, is an old saying which bears perhaps a degree of truth. The "children's doctor," however, is *born* only—he cannot be made.

The man who has a smile in his eye and a "certain way with him," can do more good by merely holding the baby a minute than the stiff, pompous or nervous clumsy practitioner can accomplish with a day's medication. One man's entrance is hailed by mother and sick child with equal delight; the approach of the other is heralded by the cries of an apprehensive little one and the weary expostulations of its mother. To the right man the little sick arms go out, and whatever "docky" wants done, is done, even if it does hurt.

The other fellow has to have one or two adults hold the child to enable him to look at its tongue and he shouts his orders to a frenzied woman, the while he mops his face and wonders whether he did really hear rales. When such a man tries to investigate the tonsils or palpate the abdomen the procedures resemble a free-for-all fight. That a really sick child derives benefit from the visits of this doctor is to be doubted. Hence, as mothers have a remarkable faculty for knowing what helps their little ones, the unpleasant doctor, no matter how clever, is likely to find his pediatric practice growing less.

On the other hand, the man who cures the children has the confidence and love of the mothers, and the doctor who treats the



mistress of the house is very apt to take care of its master (and his dependents also) when the need arises.

It is not at all hard to win children, even when sick, but certain qualities and procedures are essential to perfect success.

First of all, *never lie* to a child; be gentle, firm and positive in action; spend a few moments "getting acquainted," and if the child is old enough, try to make his illness and the treatment a subject of interest. For instance, a child burning with fever can be told that he is "the scarlet prince" (or princess) on whom a wicked witch has laid a spell which can only be broken by the doing of certain things by the magician—yourself! The spell makes the tongue white, the skin speckled and the pulse quick, and if it isn't broken, the little "scarlet prince" may be very ill. Of course, any afflicted prince will eagerly aid the magician to defeat the witch, even if he has to take pills and funny stuff in glasses to do it, and will eagerly await the time when the latter can come again to see how his charms are working.

The mother is left to see that the witch doesn't get at the prince and tempt him to do what he shouldn't do, and as she usually comes in her invisible cloak and whispers, "Don't take that nasty medicine," it is very necessary that the magician should have a deputy.

This may appear trivial to the savant or grimly scientific physician, but it means a great deal to the children's doctor and his patients. I know that more than one useful life has been saved by the turning of the illness into an absorbingly interesting combat between the "wicked wizard" and myself—the patient of course being the bone of contention.

If you have to do a painful or disagreeable thing, tell the child (if he asks) that it is painful or what not, but that it is essential to success, and that other boys or girls have been through it and laughed afterward. Offer some reward for good behavior and be sure to give it. Don't promise a child and break your word. Take pains to save pain. A tube of ethyl chloride, a bottle of

chloroform and a little cocaine solution will enable you to do many things without causing suffering. Never tell a child that he will be hurt until it is necessary to do so—apprehension is bad for small people.

Be gentle and never hurry. Never cause the little one more discomfort than you must, and always present the brightest side of things.

If the patient is asleep when you arrive, then is the best time to take the pulse and temperature. Remember that in childhood



DR. GEORGE H. CANDLER

the slightest thing may cause the pulse-rate to leap upward. In pneumonia the rate has been as high as 220 per minute, and the child recovered. In young children it is useless to attempt taking the temperature in the mouth or axilla; the rectum alone is reliable. Use one finger on the radial artery and desist if for any reason the child resists; wait until you have secured his confidence.

It is wise while the parent or nurse is talking to watch the child. The face tells many stories to the trained eye and the actions tell more. A quick respiration—even if there is some temperature—need not lead to the diagnosis of lung-involvement; all sick children breathe quickly and we must look for whistling, sighing, labored or "catchy" breathing before suspecting dis-

order of the respiratory organs. The normal ratio of pulse to respiration in children is 3 or 4 to 1. The sitting or standing child breathes more frequently than the recumbent. If we note a respiratory rate of 40 or 50 to a pulse rate of 120 to 130, then we had better examine the chest thoroughly. During dentition respiration is likely to be markedly increased. It is not till the tenth year that abdominal breathing ceases. Girls are more likely to present costal breathing.

A child who has been frightened may present all the evidences of infection, but after sleeping a few minutes, temperature and pulse will sink to normal. It is worth noting that in children suffering from fever the difference in morning and evening temperature is especially noticeable.

Never give a child a full dose of an antipyretic till you have examined the heart and learned something of its history. Collapse may follow such medication in children with a weak heart or those prematurely born.

Take pains to find out just what the patient has been eating, and ascertain positively his whereabouts for the past day or two; in fact, get all the information you can relative to the case, but unless you have an infant to deal with, do your talking out of earshot.

Always auscult before percussing the chest and try not to use instruments on your first visit. In children the heart-sounds are much louder than in adults and may be heard over the back and abdomen. The apex-beat is outside the nipple-line and the first sound is equally clear at the arterial and venous orifices. From birth till puberty there is no accentuation of the second sound. It is not advisable to auscult while the child is crying, although bronchophony may be revealed when infiltrated areas are deep-seated. All sounds are louder on the right than the left side, and "puerile breathing" is noted after the sixth month. The inspiratory sound alone is heard plainly in small children, the expiratory being almost indistinguishable. Between the scapulae bronchial breathing is normal; if heard anywhere else it is pathological.

Be sure that rattling of mucus in the nose, etc., is not mistaken for rales. It is well to

have the child sitting erect when percussing. If it is on its back the depressed thoracic walls cause dullness; if on its abdomen the diaphragm and intestines are pushed upward and impede full respiration. The child may lie first on one side and then on the other, and the thorough examination of the lateral walls should not be overlooked.

No experienced man will percuss the heart in a seriously sick child; we can learn all we need to know without endangering the patient. That great changes take place in the area of cardiac dullness between the first and twelfth years should be understood. At one year old dullness (absolute) extends to the third rib along the sternal border and as a rule does not extend to the mammillary line.

At six years absolute dullness begins at the upper border of the fourth rib and the lateral boundaries are displaced one centimeter to the median line. At twelve the dullness and conditions generally are those observable in adults. Anemic murmurs however are rarely heard in childhood. As it is a very difficult thing to ascertain the exact size of the heart in children it is advisable in serious cases to employ the x-ray.

In tedious examinations of the body-cavity give a few drops of chloroform; this is preferable to a struggle. In ordinary examinations of the nose, throat, etc., most children will submit after they have seen someone else "perform." The finger will tell most things you want to know about the rectum and you need not scare the child with a speculum. If you show a child the workings of an auroscope or electrically lighted tongue depressor, etc., as applied to yourself, he will be eager to have it used on himself also.

Make your suggestions regarding medicines and food outside the sick-room, but don't forget to ask the little one what he would like best, promising he shall have it if permissible. If it is not, say nothing. Take some care to make your medicines acceptable and impress upon the child their importance.

GEO. H. CANDLER.

Chicago, Ill.

[This article is "just a taste" of Dr. Candler's splendid new 400-page book on "The Every-Day Diseases of Children," which has just left the presses of The Clinic Publishing Company. It's a "meaty" thing—right straight through, something we don't really see how you *can* get along without, and the price is only \$1.00!—ED.]

### TWELVE YEARS OF ALKALOIDAL EXPERIENCE

Twelve years of extensive country practice since becoming a member of the CLINIC family may be fairly compared with more than twelve years of previous work, and each year has but more strongly impressed me with the fundamental truths which have all along underlaid the teachings of practical medicine in THE ALKALOIDAL CLINIC and its successor.

Some eight years ago I thought my cases of pneumonia, treated upon the plans advocated by your editors, were sufficiently numerous to be of value for study and comparison, so the series of one hundred and thirty-four consecutive cases of every form of pneumonia which has come under my treatment were tabulated and submitted to your editor for publication, if he considered them available. These cases had been seen during some four years immediately preceding, and at an altitude of about 7,600 feet. The number of cases did not vary materially from those observed during the same period of time previously and under other treatment, but results seemed eminently satisfactory to me. A note was made in this report that a number of other cases which bore every mark of becoming distinct cases of genuine pneumonia surprised me by not doing so, for which I was disposed to give the treatment some credit. The editor, I believe, called special attention to that remark at the time.

I am now able to report that during the eight years which have followed, my pneumonia cases for some reason have diminished alarmingly, my case records showing only from six to eight per year, and not more than two per year where

treatment was begun within twenty-four hours of the initial chill, so instead of being able to extend my report by a new series of two hundred or more, I can only submit thirty-eight cases in that time, with three deaths, none of these fatal cases having been seen until after the third day of the disease.

As my practice has been practically identical with that of the time covered by



DR. J. TRACY MELVIN  
Member of the Colorado State Board of Health.

my first report, I am driven to conclude that either we have had eight years of rest from severe pneumococcic invasion, or else that prompt alkaloidal medication has, as a matter of routine, jugulated scores of cases in this community. I can see no other alternative.

Which of the two explanations is the more probable I can perhaps better discuss twelve years hence. Sufficient to say, that in one disease at least, I feel that a perfectly satisfactory treatment has been outlined, at least as regards the type of cases met with in Colorado.

This treatment may be simply and easily epitomized by the three most important

dangers in this disease, and the three classes of remedies advocated for its different stages.

First, period of invasion, danger from excessive disturbance of vasomotor system: remedies, aconitine and veratrine.

Second, period of development; danger from toxins formed; remedies, elimination calomel and saline.

Third, period of crisis and defervescence; danger cardiac failure, from toxins or exhaustion: remedies, strychnine and digitalin.

All to be modified and combined as the needs of each case and each day demands.

J. TRACY MELVIN.

Saguache, Colo.

[It certainly is a strange thing that the "shrinkage" in the number of cases of pneumonia should be confined to Dr. Melvin's part of Colorado, for so far as we have heard there has been no very marked decrease in the number of these cases in other portions of that state—as there has not been in Chicago. Isn't it at least a *possibility* that the method of treatment which Dr. Melvin uses has *something* to do with this strange condition of things. Shouldn't the man who desires to cure his cases at least investigate this possibility, that seems to promise so much.

Dr. Melvin is a careful man, a man who may be trusted, one whose judgment is not stampeded by spasmodic paroxysms of enthusiasm. He is a member of the State Board of Health, not without honor even in his own country! We have a "notion" that when he says something it is worth thinking about.—ED.]

#### A MEDICAL MISSIONARY IN CHINA

I hardly feel entitled to any space in CLINICAL MEDICINE, but in answer to your request for a letter about my work here, I will write a few words. In the sense of statistics it is not a great work, but in another sense it is, for it helps to make the Chinese better friends to the "foreigners," and is instrumental to some extent in extending the Kingdom of God.

When I first came here, five years ago, I could not go on the street or into the country anywhere without being followed by rough crowds and hearing abusive language, but long ago that has changed, and now wherever I go I am greeted kindly by name and title, and treated respectfully, and any other European suspected of being in any way connected with me is afforded the same treatment. And it is all because one foreign woman doctor has lived here these five years, and treated, to the best of her ability, all who came to her in physical or mental distress.

My medical work is mostly confined to the dispensary, excepting an occasional call out, usually to treat attempted suicide, which is very common.

Until a year ago we lived in a Chinese house, very uncomfortable and inconvenient, but this year we have had our own pleasant, comfortable buildings, one for the home and another for the dispensary.

Last year we treated almost 4,000 patients, but I think the number will be perhaps as large again this year. The most common diseases are those of the skin, the eye, and those resulting from malaria. Intestinal parasites are almost universal. A very common and to me most distressing disease is elephantiasis. I have seen so many men and women with their legs—sometimes one, sometimes both—so enormously enlarged that it must be an awful burden to be obliged to walk and work as they must do in order to live. Many of the patients are poor. Medical services are free to all, but all but the very poor must pay for the medicines.

I have been an interested reader of CLINICAL MEDICINE for a year and a half. I think it is a splendid journal and read it thoroughly. I have gained much help from it, not the least of which is my admiration for the work of its chief editors, in building up the work they have and helping the world to something better in the line of medical treatment. It always helps us to admire the greatness in others.

I am an ardent homeopath myself and have found it very useful, but I do not be-

lieve there could be no advance made, even in homeopathy. I am sure the "clean-up" theory has taken a pretty firm hold of me, for one thing.

There has been little chance to try the medicines I recently ordered, except calcium sulphide, but that has been a great success in some especial cases. One was a boy of seventeen with a large axillary abscess, which I opened. The next day it was burrowing down into his arm a distance of four inches, and I felt it would certainly be necessary to make another opening, but gave him calcium sulphide, six granules three times a day, and in two days all in-

in diameter and of most irregular shape, then fired from a shotgun.

I thought surely there would be suppuration, but I gave him calcium sulphide for some time and he is almost well, with no inflammation whatever.

My "few words" are already too many, and I will stop with best wishes for the continual success of everything represented by your journal.

ROSA W. PALMBORG.

Lieu-oo, China.

[One of the editors of THE CLINIC has known Dr. Palmborg for many years, and



THE CHINESE OFFICIALS HONOR AN AMERICAN WOMAN DOCTOR WITH A VISIT

flammation had subsided and he was soon well.

Another case was one of a gunshot wound. The charge passed in just above the wrist on the back of the arm, leaving a ragged hole about an inch wide, then obliquely upward between the radius and ulna, breaking some pieces off the latter, and stopped in the fleshy part of the middle of the arm. With cocaine I cut down and removed two jagged pieces of lead and some splinters of bone. The lead was dirty and had been melted down and cut into pieces about three-eighths of an inch

knows the devoted, self-sacrificing work she has done and is doing. She is the only white woman, indeed, the only white person, in an interior Chinese city of 25,000 population. That gives you some conception of the determination, the fearlessness, of the American medical missionary. Now don't feel sorry for Dr. Palmborg! While we know very well that she longs for and appreciates the society of other "good Americans," still she is very busy, absorbed in her work, and has her own family to look after, consisting of a Chinese little one that she has adopted as her "very own,"

and a Chinese grandmother whom she has taken into her home and heart.

The missionaries, and particularly the medical missionaries, are becoming a great factor in the "new China." The Chinese are now alive to the value of western knowledge and the once despised missionary is now recognized as a source of power and a fount of learning. And rarely, indeed,

he not put the theology of his age into his analytical retort and turned his microscope on its claims and conceptions—that "the more a thing is divided the more multiple it becomes." This fact can be proved up to a certain point, when, like every other thing, it disappears behind a veil, beyond which the mere materialist insists that all which is known or assumed to be known, is mere idle speculation.

But I am not intending to stop to argue with this materialist, but simply hold to my own belief in silence, to see what answer I can find to the question that stands at the head of this paper.

Perhaps we might ask for the better definition of a simple or a compound; but then some of us may have discovered that definitions do not always define. Generally speaking, in medical parlance, a simple remedy is the powdered plant or a tincture made from it, and no admixture of any other remedy with it. Such are the "normal" tinctures of The W. S. Merrill Company, or the "specific" tinctures of Lloyd Brothers. And however extensively the eclectics may be given to combining these tinctures, synergistic or otherwise, it has always seemed to me that it was not the inten-



DR. PALMBORG AND HER "FAMILY"

has any confidence placed in these devoted men and women been misplaced. What they have done for China is beyond estimate. What they may do is only measured by their own human limitations and the support they receive from those of us at home.

Dr. Palmborg's address is West Gate, Shanghai, from which point her mail will be forwarded.—ED.]

#### ARE ALKALOIDS AND CONCENTRATIONS SIMPLES OR COMPOUNDS?

It is asserted by a wise one of the eighteenth century—who might have been one of the authorities in science of this day had

tion or desire of the skilful manufacturers of these remedies that they should be so combined. However, this may be an extraneous question.

I cannot see that all the arguments ever advanced, pro or con, as to whether the whole plant, or one of its active principles isolated, is preferable in the treatment of disease, ever convinced anyone. Nor can I see what the huge doses of the crude alkaloids of sixty years ago, have to do with the present day. Sixty years ago I was a boy of ten, but the old eclectic doctor, who was our family physician, used to bring me the medical literature of those days in which the allopaths painted the budding homeopaths a few shades darker than Satan, and

the Thomsonians—well, it took a compound of lampblack and bitumen to bring out their details. The old doctor was one of the first to adopt the new fad of active principles, but I think he modified his views to some extent later on. Still the blunders of those practitioners were leading on to something. Their misuse of the powerful alkaloids does not affect my confidence in their superior usefulness and managability, any more than the tremendous doses of calomel of our fathers frightens me from the use of the 1-6 grain granule. (After all I question if a man or thing is really anything until he or it is dead, buried and resurrected.)

The only argument that convinces me is the argument of my own experience. I am willing to take the suggestions of the experiences of other men (but only *as suggestions*) and try to see the reasonableness of them, although when a doctor goes on to the witness stand, posing as an expert, and says that he never used aconitine and never knew any doctor who ever did use it, I find limits to my patience. If he never used it himself, and never heard of a doctor who did, I am wondering how he knows enough about the alkaloid to testify as an expert in a murder case. Will Dr. John Uri Lloyd kindly lend the "expert" a copy of "Stringtown on the Pike?" Well, I promise not to wander any more.

I am questioning whether the fact that certain plants hold various active principles within themselves, proves that when we select a plant for therapeutic use, we have got to maintain that balance. What balance? How much atropine is there in a pound of belladonna root? I know that many chemists claim to have a certain definite amount in every ounce of tincture they make. Doubtless *some* of them do. There are *some* men whose word is beyond doubt. But if I wish to administer 1-500 grain of atropine or aconitine, I really cannot see why I should drown it in a dram of alcohol. I prefer to open my satchel and take out a granule of Abbott's No. 9 or No. 32. For two reasons: I fancy I get quicker results from it, and I don't get the smell on my fingers that a tincture deposits. Mind, I

don't intend to ignore the fluid preparations. I have a fair stock of Lloyd's and Merrill's on hand, and should have more were it not for the fact that I have to buy enough of some of them to last me to the end, even if I doubled the seventy years I have reached. That furnishes two reasons which lead me to prefer the active-principle form, and I hope it does not render me a blind, bigoted devotee to a fad.

But to return to the statement quoted at the beginning of this paper, "The more a thing is divided the more multiple it becomes." What is it in a remedy, whether a galenic tincture or an alkaloid, that sets up an action, starts an energy, that cures a disease, or kills a patient if ill-chosen or carelessly used? I claim that it is an inherent antagonism existent in the remedy itself. The antipathies of things show no one source. There seem, even to broad and deep reason, at least two principles in everything that war with each other. There may be—aye, *are*—more, for as we divide things this antipathy appears in each fragment. The particles—atoms if you please—arrange themselves according to some weird law of polarity. I do not propose to enter into the esoteric of this fact, for Dr. Abbott will immediately put the lid on me. But if this idea, that each fragment of a broken substance rearranges its atoms, or they arrange themselves according to some mysterious (if we choose to consider it so) law of affinitive attraction, how can an alkaloid be termed an "isolated" thing. Aye, I am willing to carry this question further and ask if any one can really tell if the alkaloids do not contain, to a certain extent—perhaps infinitesimal extent—some of every ingredient of the original substance? Marked effects have been obtained by tinctures of such attenuation that the most searching analysis failed to find a trace of the drug.

It is too late in the world's history to deny this fact. You may call this hypnotic suggestion, but eliminate the suggestive element from therapeutics, and there is little of value left. I recall an experience of several years ago, a case of uncontrollable vomiting of pregnancy. I asked the advice of a friend

who was a homeopathic physician. He said, "Give her sepia." I got some of Clapp & Sons 3x potency, but got little or no effect, and I reported the failure to my friend. He said, "Try hourly doses of the 200th potency and stop as soon as you get the effect." I followed his advice and gave only five doses when the vomiting stopped and never reappeared. The fact was patent, but I never attempted to explain it. Now every one knows that large doses of colocynth will cause griping and inflammation



DR. JAS. M. PHELPS

of the intestines, but I have cured some savage attacks by dissolving just one pellet of Abbott's No. 76 in eight teaspoonfuls of water, giving a teaspoonful every fifteen minutes until relief, and then less frequently. Can anyone explain this reverse action of colocynth? To deny it, and set a man down as a victim of hallucinations, does not disprove it.

Well, it is some over ten years since an article by the late Dr. Coleman of Texas interested me so that I began to investigate alkalometry, and from beginning with a vest pocket case of six half-dram bottles, I have come to carry one case of 39 vials in my satchel,

and two of 9-vials each, that I conceal about my person. I have never yet regretted my introduction to the system and if I have committed a sin in depending largely on alkaloids, I have not yet repented. In fact I am a long way from that recantation at present.

I thought to have stopped here, but the suggestion that fragments of the whole plant may exist in the alkaloids pursues me. The constituent atoms of a remedy are so intimately interlocked that it may not be impossible that some part of every constituent may remain with the alkaloid that we attempt to isolate. I do not make this as a dogmatic statement, nor will dogmatic denial disprove or weaken its reasonable possibility. For it is the belief of more than one deep thinker, alkaloidist, allopath, galenist, eclectic, whoever he may be, that science has as yet only been picking up shells and fragments that have been washed up on the beach that bounds the great sea of knowledge. The science of today may be a very antiquated system fifty years from now. The researches of such men as Hahnemann and Lloyd have put a different aspect on medical and chemical affairs within the past fifty years. To doubt that the next fifty years will bring changes as great, or greater, is to question the ability of the Creator to raise up His witnesses according to the world's needs, a question which finds no room in the mind of

JAS. R. PHELPS.

Dorchester, Mass.

[As a "P. S." to this interesting letter Dr. Phelps added a Hebrew motto, with the note, "Ask Father Epstein to elucidate." Not only have we asked "Father Epstein" to elucidate, but to write a comment on Dr. Phelps entire paper—and here it is:

\* \*

Dr. Phelps is a mystic and is not backward to let one know he is one. At the same time he is practical enough to make use in his practice of whatever he has tried and found best in relieving unhealthy conditions and "obviating the tendency to death." As a mystic he is a thinking phy-



sician and the very antipode of that class of drug-dispensing "docs" whose stock of knowledge consists in "this is good for that and that is good for this," as they have it on the labels of their medicaments plainly printed for them. And as a thinking physician he logically enough became an alkalometrist and stays one. Dr. Phelps chose a motto from Psalms 39:3 and gave the Hebrew original for the Common Version: "While I was musing the fire burned, (then) spake I with my mouth."

הִנֵּנִי תִבְעָר אֵשׁ: דְּבַרְתִּי בְּלִשׁוֹנִי

Father Epstein, who Dr. Phelps says will elucidate the Hebrew, is also a mystic and therefore not only a thinking physician and ergo an alkalometrist, but also as a thinking Bible reader takes the liberty of an original Hebraist and translates more reasonably that fraction of verse three (Hebrew Psalter, verse four) thus: "While I meditated the fire of my speech burned in my tongue." This I think is in better accord with this entire Psalm, which is a protest against the atheistic fatalism by which the materialist attempts to settle all the intricate problems of human life.—"FATHER EPSTEIN."]

#### A "POSY" OF ALKALOIDAL VERSE

The "limericks" contributed by one of our readers a month or two ago seem to have been seed scattered on good ground, for successive crops have been springing up ever since. These have been promptly turned over to our "poetaster," who has tasted, made up a wry face now and then, but on the whole pronounced them "good." The editor, being only a cursory patron of the esthetic arts, does not feel entirely qualified to pass upon these productions, though from a hasty examination of the products it seems to him that some of them seem rather to stand in need of the attentions of a chiropodist.

However, it's good stuff! We know it— for didn't our own boys write the whole batch? Furthermore, since these have gone

into type more poetry has arrived—and still there is room. Come on!

#### ALKALOIDAL LIMERICKS

A woman with a constipated smell  
Got frightened—'cause her waist began to swell;  
But a dose of the saline  
Took the swell and smell out fine;  
So she bought a dozen cans—to keep well.

Uncle Billy got the jim-jams drinking ale;  
He saw snakes enough to turn a nigger pale.  
Doctor gave him cicutine—  
Ought 'o made it Paris green,  
For he's full again; and ought to be in jail!

A palpitating heart was beating fast;  
Every breath was thought to be the last;  
But a doctor "up to snuff"  
Gave of alkaloids "enough,"  
And the danger line was very quickly passed.

Aconitine and Fever had a bout;  
Mr. Fever said: "I surely can win out."  
Then Aconitine got busy—  
Said poor Fever, looking dizzy:  
"You're the 'knock-out drops,' without a doubt!"

Deacon Jones had a bad congestive chill;  
Called the doctor, feeling mighty ill.  
But a dose of atropine  
Soon reduced the swollen spleen—  
And the deacon—never paid the doctor's bill.

Doctor's baby ate a little pork and beans.  
Woke her daddy—awful colic—fearful screams.  
But the anodyne of Waugh,  
When administered by "paw,"  
Lulled the kid to slumber—and sweet dreams!

Sammy Smith with croup one night was taken sick:  
Folks were frightened, but the doctor, coming quick,  
Gave some iodized lime;  
Cured up Sammy in no time.  
"It's the stuff," he said, "that *always* 'does the trick.'"

J. M. SHALLER.

Denver, Colo.

#### MORE ALKALOIDAL LIMERICKS

A larynx, all stuffed up with croup,  
Caused Johnny to gasp and to whoop,  
But with calcidin,  
The doctor did win,  
And saved him from "flying the coop."

Mrs. Smith came to me with a quiz:  
"Could I help her old man's rheumatiz?"  
Calcalith and salith  
Did the trick for Pa Smith,  
And now he is walking to biz.

Young woman: first labor was dry:  
"O Doctor, I'm sure I shall die!"  
I gave H-M-C!  
No more worried was she,  
And soon followed her baby's first cry

An appendix vermiformis once said:  
 "I can't seem to get through my head  
     Why seedlets of grape,  
     Finding *my* mouth agape,  
 Cause my owner to take to his bed.

"Or why, when I am inflamed,  
 I'm not soothed as those otherwise named,  
     Do these rush operations  
     Increase reputations  
 Of surgeons already so famed?"

WM. E. PHILLIPS.

Springfield, Mass.

### "THE SKEETER"

The damned *Stegoma Skeeter*  
 Rams his bill into your seat, or  
 Any other place that offers half a chance to do you;  
 Then he'll see-saw, and he'll teeter  
     In a diabolic meter,  
 While he squirts plasmodial legions in a hellish  
     hail-storm through you!

W. C. COOPER.

Cleves, Ohio.

### LITHOGRAPHS

"Books in the running brooks, sermons in stones,  
 and good in everything."

On sterile rock some flower grows,  
 And from it strength and fragrance draws.  
 From barren sources knowledge flows,  
 To him who seeks her wondrous laws.

I asked the Phoenix, foolish bird,  
 Forever roasting in the fire,  
 "Why will you be so blamed absurd?  
 Why not fly up, and then fly—higher?"

He answered, "I'm an emblem bright,  
 A pyromaniac, you see,  
 I'm on the job both day and night,  
 It's the actual cautery for me."

A statue I interrogated;  
 Sans arms, she stood, quite shy, pathetic,  
 "Pray, when your limbs they amputated,  
 Did they use Abbott's anesthetic?"

A stony stare, the marble heart,  
 She gave me, it was disconcerting.  
 "Young man," said she, "you know not art,  
 G'wan now, and don't be flirting."

I quizzed the Sphinx, "I'll bite, now answer,  
 Tell me the riddle you've kept so long.  
 Were vocal cords destroyed by cancer?  
 Or were they simply strained by song?"

She cleared her throat, prepared to speak,  
 While gazing calmly out to sea,  
 Her stony lips in whisper weak,  
 Replied, "I pass; you can search me!"

The noble Laocoon I sought,  
 By horrid serpents sorely vexed.  
 Said I, "The gold cure can be bought;  
 Brace up and try it, man! Get next!"

He gave the snakes an extra pinch,  
 And paused just long enough to say:  
 "I've tried it, and it ain't no cinch;  
 Go on now, it's my busy day."

"My character I must maintain,  
 Of reputation I've no lack,  
 To cultured minds it must be plain,  
 I'm the boss dipsomaniac."

And so, and thus, it is made plain,  
 To thoughtful minds, and those prepared,  
 Sermons from stones one may oft gain,  
 Just as the poet has declared.  
 (Apologies to anyone from whom anything has  
 been cribbed.)

A. H. S.

—, New York.

### COLDS, "FIDGETS," COLIC AND OTHER THINGS

In a former contribution to your journal I mentioned as a fact that since using alkaloids, glucosides, etc., I approached my acute cases especially with a confidence born of success.

Cleaning out, cleaning up and keeping clean the alimentary canal is the essential proceeding, and without it one must not expect remedies to act in a thoroughly satisfactory manner.

The proper use of alkaloids, etc., contemplates a knowledge of the physiological action of each, together with its proper application to the pathological conditions present in the individual case. It is not infrequently a difficult matter so to adjust their uses as to administer just enough. To this end the physician must know the individual as well as the case.

This is the season productive of "colds" in the various parts of the body. The condition is that of a disturbance in the equilibrium of the circulation, some internal organ or tissue becoming the seat of congestion. In a great majority of these cases jugulation may be successfully practised, provided treatment be instituted early.

If the cases be not completely jugulated they may, in a majority of instances, be brought to a more successful termination by the use of alkaloids than if glucosides are used. Aconitine, dosimetric trinity and defervescent compound meet the indications for jugulation by restoring the equilibrium

of the circulation; cleaning the alimentary canal with calomel and podophyllin, followed by a saline laxative, enables these restorers to do their best work. These three defervescents are at times ably assisted in their action by digitalin, bryonin, glonoin, hyoscyamine, gelseminine, colchicine, emetine, apomorphine, atropine, and so on, later "taking up the slack" with strychnine arsenate, brucine, nuclein, etc., at the same time decreasing the possibility of autointoxication by the use of the sulphocarbolates. Here you have a lot of practice "in a nutshell." Providing it be indicated I consider veratrine the very best single eliminant. I prefer apomorphine hydrochloride to any other expectorant, this remedy seldom producing nausea, in fact practically never if in proper dosage. Children bear large doses.

Cicutine hydrobromide is *the* remedy for "fidgets" and for ordinary nervous excitement. It is both a spinal and cerebral sedative, surpassing the bromides, except in cases of cerebral congestion, and frequently mitigates the pain in cancer.

Waugh's anodyne for infants controls infantile colic and restlessness, although cicutine hydrobromide is of greater value in the troubles of children in which twitching is a prominent symptom.

Calcium sulphide (to saturation) and echinacea are the remedies for septic conditions. Baptisin is often of great service in typhoid conditions. Caulophyllin the rigid os is a great remedy for use by for obstetrician. Copper arsenate in minute doses will give good results in gastrointestinal catarrh of different grades of severity.

Strychnine arsenate and amorphous hyoscyamine do excellent work in appendicitis after the subsidence of the acute symptoms. In producing defervescence, spongebaths, mustard, and hot and cold applications must not be forgotten.

The patient should so far as possible be kept clean internally, externally, and eternally. Ventilation should be thorough and quietness reign supreme.

I desire to compliment Dr. Abbott and his capable assistant upon the results of their labors for the past several years.

Nothing but the complete "Abbottization" of the work has enabled them to



DR. HORACE R. POWELL

bring CLINICAL MEDICINE up to its present high standard.

HORACE R. POWELL.

Poughkeepsie, N. Y.

#### ALKALOIDAL MEDICATION

In these latter days of rush and carelessness about health, it becomes somewhat a matter of difficulty to gain a hearing with

the average patient early enough to stay the tide or tendency of the body to degenerate. The medical adviser often has not sufficient opportunity for observation of the progress of insidiously developing disease-processes until the patient is literally compelled to surrender long enough to recover the physiological equilibrium, and only when there is left sufficient physical stamina is there hope of fairly complete restoration of that equilibrium.

Happily, dosimetry and alkaloidal medicine have given us simple means in the shape of simple medicines, with energy sufficient to be up to the requirements. The alkaloids permit us to attack disease with precision at the first sign of danger, or to defend the organism with equal precision from the ravages of disease after it has become established, and they accomplish this without annoyance to the patient from nauseous medication.

Why have so many physicians suggested treatment founded upon the idea that abstinence from drugs alone will suffice for the patient's cure, which amounts to the same as a do-nothing practice of the art by which we are to gain a livelihood? It is because the various means of treating the same conditions are so different that the physician scarcely knows whether he will get the desired effect from the use of his remedies and, indeed, whether he may not aggravate the condition he seeks to relieve. The uncertainty of the galenic remedies fosters therapeutic nihilism—no doubt about it.

How could it be different when we consider the fixity of composition of some of the preparations which enter largely into the official *Materia Medica*?

"For if the energy of the plants varies in accordance with the age, the part of the plant used, the locality in which they were grown, the climate in which they were raised, and the time when they were gathered, etc., shall we expect to find in the various pharmaceutical preparations of these plants, extracts, tinctures, etc., that uniformity which is indispensable to the therapeutic ends we hope to attain by their use?"

At times we may, by the employment of such preparations, produce overaction, and at times fail to obtain the required effect, and at the expense of the patient in both instances.

Here abstinence finally becomes excusable. It is better to leave nature free to act in her own way of effecting cure than to hinder by excessive or insufficient medication. If this is not true, Burggraeve and his followers have made a great mistake. This evidence has now the possession of a



DR. W. C. BUCKLEY

higher authority—the thousands of physicians who are using the alkaloidal form of medication. Many who are practising this kind of therapy have announced that even as they felt a hesitancy and powerlessness with the old methods and ancient medicines, for really many of them are ancient, so now these men feel fully armed and confident with the alkaloidal granules.

The plan of administering small doses repeated until the desired effect is produced, which alone will fully assure the harmlessness and efficacy of a therapeutic method, is only possible with single and exactly

measured medicines which shall be entirely soluble and therefore quickly absorbed.

W. C. BUCKLEY.

Philadelphia, Pa.

### THE LATE DR. COLEMAN

Any effort to tell the story of the alkaloidal movement in America which failed to mention the part played in it by the late Dr. W. L. Coleman of Texas would be sadly defective. We therefore take pleasure in presenting a picture of the good doctor, taken with his little grandson, one whom we was fond of calling his "alkaloidal baby," since he was brought through all his childish ailments with the little granules.

Dr. Coleman, so his son writes us, was born in Mississippi, in the year 1833. His father was a cotton planter and miller well known all over Leake county, where he resided. His education was received at a private school sustained by his father and an uncle, the teacher being a one-legged veteran of the war of 1812. Later he attended Oakland College in his native state, Southwestern University of Georgetown, Kentucky, and was graduated in medicine from the Medical Department of the State University at Augusta, Georgia.

After practising a while in his native state, Dr. Coleman went to New Orleans to render what assistance he could during the yellow-fever epidemic of 1857. He then moved to Texas, settling at Liberty, marrying Miss Maria Stewart of Galveston, in 1860. He was in the Confederate army for several years, and aided in yellow-fever epidemics in Houston, Texas, in 1867, in Calvert, Texas, in 1867, and in Memphis, Tennessee, in 1878-79, thus acquiring the widespread knowledge of this disease which characterized his writings. His book on "Yellow Fever" was brought out by The Clinic Publishing Company, in 1898. In Memphis he treated hundreds of cases, with a mortality of only 5 percent, although the death-rate was usually from one-fourth to two-thirds.

Dr. Coleman became interested in alkaloidal therapeutics in 1886, and corres-

ponded regularly with Burggraeve and other European dosimetrists, contributing also to the foreign journals. When THE ALKALOIDAL CLINIC was started he became one of its most enthusiastic supporters, and older readers will recall with interest the articles which he contributed to its columns.



THE LATE DR. W. L. COLEMAN  
and his "alkaloidal baby"

Dr. Coleman died in 1904, having retired from active practice in the year 1900. He was a strong man, truly one of the bravest of the old guard. We are glad to have this opportunity to render homage to his memory.

### OBSESSION OR THE DOCTOR'S NIGHT OUT

When the gray comes in your whiskers,  
And you haven't any money,  
It's then you'll have an "orful" time,  
To get yourself a honey.

I wanted to be took with my back hair curled and in a peck-a-boo waist, but I went and let my photographer persuade me out of it. He says, says he, "Doctor, if the intentions was to embellish an ornamental front on *The Police Gazette* I wouldn't say a word, but for the quite staid face of a first-class medical publication it would be

too bold, too striking as it were; it would savor of monopolistic tendencies with an Oren O'Neal flavor."

[Look for Dr. Clason's picture next month. Out of consideration for the balance of "the picture gallery" (and because it came in too late) we were obliged to omit it from this issue.—ED.]

Well, there is no use to argue with a man that can talk like that. I gave it up! Now, before you jump on to this with both feet let me tell you something else. I've been "took notice of" to a small extent by the lay press that entitles me to enrollment as a *litterateur*. Now there is nothing so damning to a literary cuss as a respectable reputation. Literature is necessarily immoral. To write it you must be as the environment you endeavor to portray. Wherefore, the past masters of the art resort unflinchingly to any means, no matter how desperate, whenever they find themselves becoming tainted as it were with respectability. Witness that prince of the pen Samuel Marcus Aurelius Clemenstini. What did he do? Did the Lady Godiva act right in the heart of London? I believe he did wear a bath-robe, but what's that? I've been practising with one and it's a positive fact I can so manipulate that bath-robe that I look more indecent in it than I would without it.

Now we'll get back to science and obsessions. Obsessions are brain storms, throw-backs to a previous antesclerosed state as it were. This obsession of mine took the form of an irresistible longing for a regular old-time courting-boys' night out. For weeks I sternly frowned it down because, of course, for a doctor to do anything like that would be just simply awful. But at last (happy thought!) as a literary character it became perfectly feasible. In fact it was exactly the proper caper, the one thing needful. I hesitated no longer.

Here is a list of the necessities to insure a proper technic. A high-wheeled yellow-gearred box-buggy, with a three-quarter seat; a ewe necked, spike-tailed old ringer, one of the white eyed-browed old bay fellows that used to do his mile at the fair grounds in

four and quarter and can do it by moonlight on a straight piece of pike in two thirteen; a girl; sixty-five cents for ice-cream sodas and \$2.00 to keep your "*revivat-in-vitro*" properly replenished; three small towns about five miles apart, where you can judiciously expend the above; and a September moon that's going to stay up as long as you are.

It wasn't much trouble to corral the whole *tout ensemble* until I come to the girl. She was somewhat of a sticker. She's what suggested that nugget of verse at the top of this. You see I wanted to preserve the unities. How, when you start out to look up a girl of the proper age, to "match up" with a man with snowflake whiskers and an obsession, take my word for it you're bumping a hard proposition. Don't think for a minute I didn't get one. Aunt Cal went. She's 63, and proud of it, and she hasn't got a gray hair in her head. She made me take the blacksmith and his wife along for chaperons but 'peared like he didn't have no strength of mind. 'Long about 11:45 he "faded"—right in the shank of the evening as you might say; but then he's married and didn't have any obsession—and that's different. It was 3:20 a. m. when I watched Cal carefully tiptoe over the back porch and silently let herself into the lean-to bedroom.

Well-a-day! Old Eclipse and I pensively meandered at a slow walk down three more miles of silent moonlit and old gray pike, and, with a sigh of regret I bid good-by to my night out—and my obsession!

"In the starlight and stillness, all dream-shadowed there,

Her beautiful eyes and her beautiful hair.  
And I, where the light hath a ghostlier gleam,  
In halls that are voiceless, alone with a dream—  
A beautiful dream of the dear days of old,  
Of eyes that were morning and tresses of gold."

L. THOMPSON CLASON.

Urbana, O.

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#### ACONITINE IN NEPHRITIS

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I would like to testify to the efficacy of the aconitine granules for the severe headache in chronic nephritis, with an extremely rapid, full pulse, with vomiting. In one

case, it being night when I was called and no drugstores being open near by, I supplied six granules of aconitine, each grain 1-134. I gave one of these every half hour. The results were very gratifying, so I have used them in several cases since then with like results. The urine showed less albumin and the stomach conditions improved, skin moist.

VAN H. WILCOX.

Minneapolis, Minn.

### GOITER: ITS MANAGEMENT AND CURE

Since the October and November numbers of your good journal (and it must certainly have a very wide circulation) were issued, inquiries one after another keep appearing and piling up on my writing desk. I did think my second article (November number) would satisfy the progressively hungry doctors all over our wide and prosperous country, but those in Canada and British Columbia seem to have a desire to know more about my technic in the treatment of hemorrhoids and goiter. Many recent inquiries are relative to the entire *modus operandi* of treating goiter. Thus, I am compelled to depend on THE AMERICAN JOURNAL OF CLINICAL MEDICINE to help me out with my many honest inquirers, or to employ a stenographer.

I have concluded to "try you on," once again. Therefore, a few words on "Goiter: Its Management and Cure." I hope this will meet the demands. Some write me *thuja* is a "new one" to them.

My method of treating goiter is as follows, and is universally successful in non-tuberculous cases: Beginning ten days prior to giving the hypodermic injection, I have the patient take a good hot-water, all-over bath every other day, two and one-half or three hours after breakfast. She is directed to scrub the surface well, using soft water and a strong carbolized soap, and to use soap plentifully, staying in the tub thirty minutes. I have an assistant rub the surface dry with coarse linen towels, using two or three towels to be sure of securing a dry surface. Then I have a healthy,

vigorous assistant massage the surface all over briskly and thus secure a clean, warm, red skin. Put on dry, warm, well-aired underclothing; have the feet and limbs warm and dry. Get the patient out into the fresh air, to take a brisk walk, half a mile or more and back, then go about her ordinary business. The bath and walk should be taken the day the following is administered: 1-6 grain of podophyllin every three hours during the day (every other day), first dose an hour before breakfast, and keep it up until six doses are taken, that and each succeeding every-other day. Should the 1-6 of a grain produce too free catharsis, take it every four hours, or five doses during the day, followed the next morning with a liberal dose of saline laxative (Abbott), repeating the latter in three hours if necessary to move the bowels freely. Keep this up ten days.

The morning after the tenth day have the patient report to your office. Prepare your injection solution after your patient reports, that it may be fresh, and have the syringe sterilized and in perfect working order. The solution consists of Lloyd's specific tincture *thuja* and sterilized water, of each 10 drops. Place it in a short one-ounce vial, suspend the vial containing the solution in hot water (about 110° F.), draw the solution into the syringe, grasp the enlarged gland firmly between thumb and finger, plunge the needle into the center of the gland, withdrawing the needle one-sixteenth of an inch and inject the solution very slowly, withdrawing the needle as you continue the injection until you get all the solution possible into the gland. Hold a finger over the puncture made by the needle a minute or two to prevent escape of the solution, and now your work is completed. Repeat in ten days if the gland enlargement has not entirely disappeared.

After giving the injection, place your patient on calcidin, one grain every two hours during the day for four weeks; first dose each morning before breakfast and continue until bedtime. A dose of saline laxative each morning ten minutes before tak-

ing first dose of calcidin, sufficient to keep the digestive tract open, clean and healthy. Remember the bath every second day, the day you give the podophyllin. You may say, "Why podophyllin?" Well, for the simple reason that it acts better as a toxin eliminator than any other one remedy. Try it and you will not be disappointed; but give the 1-6 grain granule, repeated every three to six hours, and keep it up as long as necessary to do the work.

J. E. CALLAWAY.

Chillicothe, Mo.

[We trust that many readers of CLINICAL MEDICINE will try this method of treatment, and that as many as possible will send in reports of the success they have with it.—ED.]

#### WHAT TO DO FOR STRANGULATED HERNIA

There are several things a physician may do for his patient with strangulated hernia to avoid an operation:

First, his muscular tissue may be relaxed with chloroform.

The heat attending a strangulated hernia may so expand the imprisoned gas within the incarcerated bowel as to prevent the efforts at reduction from being successful. Apply ice or drop a little ether upon the parts and by evaporation produce a sufficiently low temperature to cause the air to contract. If this does



DR. V. E. LAWRENCE

not succeed plunge the needle of a hypodermic syringe into the bowel, unscrew the syringe and allow the gas to escape through the hollow needle.

In conversation with a physician some time since he told me of a patient to whom he was called in consultation. The scrotum was distended and elongated with an enormous hernia. Two doctors had tried in

vain to reduce it. The patient was in agony. An operation was contemplated.

It occurred to the consultant that if it were possible to draw upon the bowel from the abdominal cavity instead of pushing upon it from without, the hernia might be reduced. An empty tin gallon lard bucket stood in the room. Without a moment's delay the doctor bared the abdomen and moistened the skin with water. Then he ignited a little piece of paper within the bucket and clapped it upon the abdomen. It took hold like an enormous dry cup, which it indeed was. The old man groaned with pain, but soon there was a gurgling of gas from the hernia and in a short time the strangulation was reduced and an operation prevented.

V. E. LAWRENCE.

Ottawa, Kans.

[That's the resourceful American doctor for you! And this suggestion alone may be worth fifty times the cost of the subscription. Don't forget hyoscyamine.—ED.]

#### "RECURRENT BRIGHT'S DISEASE"

On June 3, 1906, I was called by 'phone to go in haste to see a Mr. H., eighteen miles out in the country. "Come quick," said the caller, "he has gone insane." I found a man about 60 years of age, heavy build, nervosanguine temperament. His temperature was 102°F., pulse 65 per minute, respiration 20 per minute. Skin dry, "leathery" and mottled (dirty brownish splotches); semi-stupor, a badly coated tongue and bad breath; urine very scanty and high-colored; abdomen somewhat full and a little sensitive to pressure; the engorged colon could be easily felt; cold feet, hot head, every organ was greatly oppressed; heart, lungs, liver, nervous centers, brain, kidneys, stomach, bowels, skin, circulation, all by the "internal and infernal enemy." What that internal enemy was, all true alkaloidal physicians can tell you at a finger snap.

The history: He had acted strangely that morning, talking incoherently and often



boisterously, refusing all restraint. He finally lay down and was thought to be asleep, and as the ladies only were at home, they left him alone. About two hours after his wife went to his room and he was gone. A search of the premises did not reveal him. About 3 p. m. some of the "men folks" came home, and they started a search for him and found him a mile out on the prairie, lying on the ground unconscious. He was taken to the house, and at this point I was 'phoned for.

The people told me that this was the "worst spell" of several of like nature that he had had during the past three years, and that his family physician and two or three consultants had pronounced it "recurrent Bright's disease," and that he was sure to have a fatal attack almost any time. His family doctor being absent for a few weeks, and I being an entire stranger to them, made them feel greatly alarmed.

After I had exercised him thoroughly, and had made a bedside analysis of a sample of his fresh urine, the family asked me if there was "any chance for him to live until morning?" and, "are not his kidneys entirely ruined?" and "will he ever come to himself?"

I replied: "Mr. H. has no serious kidney disease. He will be rational within twelve hours, and will get well if he and his nurses will do exactly as I direct."

This was a "stunner" to them, for their family physician was high in their confidence, and I had dared to differ from his opinions. But I thoroughly explained the whole matter to them, and it all seemed so reasonable to them that they took up the hopeful end of the argument and aided me fully.

The first thing I did was to order a lot of hot normal-saline solution to be prepared, and while this was being done, I gave him a dose of the following, to be repeated every fifteen minutes for eight doses: Calomel, 1-6 grain, one granule; podophyllin, 1-4 grain, one granule; "heart tonic" one granule, and gastric sedative, one granule. This was to be followed in two hours after the last dose by saline laxative, one tea-

spoonful in a cup of hot water every half-hour until the bowels began to act, which was after the fourth dose. I always take the "saline" with me when I make distant visits.

I next gave him a large colonic injection of the now-ready, normal-saline solution, to be repeated as often as it passed; between the clysters making abdominal massage over the colon. Five injections were given during the night. By 3 a. m. Mr. H. was getting rid of an immense amount of horrible filth.



DR. O. H. WESTLAKE

His kidenys were acting better, his skin getting moist, his heart was "steady" and strong, his breathing was normal and his mind was clearing up fast. In short, the change for the better was so great that the people were puzzled. I then began with the triple sulphocarbonates (intestinal antiseptic), two tablets dissolved in a cup of hot water every two hours for ten doses, then every four hours until the bowel actions were odorless and the tongue clean and the breath normal.

After the bowels were thoroughly emptied, I directed a pint of hot normal saline solution to be thrown well up into the bowels every hour and retained. This, after the fifth injection, brought the kidneys into fine action and also opened up the entire skin. I did not allow him anything to eat, until late that evening, and then gave a glass of rich buttermilk only, every two hours.

(Brother, this is one of the finest diuretics you can give in many cases.) After the eight doses of the first prescription had been given, I gave one "heart- tonic" granule and two dosimetric trinity, No. 1., every hour for six hours, then every two and three hours between times. These "times" were the repeating of the first prescription, after twenty-four hours of rest after the first course, and also after the second course likewise.

At the end of three days we had his system so thoroughly cleansed that he was getting "hugely hungry" as he expressed it. I left him on a thirty-days' course of the triple arsenates and the triple sulphocarbulates, with the "heart tonic" and a good large talk on "how to live," and then dismissed the case.

Mr. H. has been in fine health ever since, leading a very active stockman's life, a longer respite from trouble than he has known for years.

Ye Gods! Brothers, will our brethren ever awaken to the necessity of searching out the fundamental conditions and rationally meeting the indications? It can only be done by the means and methods of alkalometry.

ORVILLE H. WESTLAKE.

Lubbock, Tex.

#### SCORE ANOTHER FOR INTESTINAL ANTISEPTICS

My young brother has had a bad case of acne vulgaris for some years. I have had him under treatment since June, 1906, and rung the changes on calcium sulphide, alnuin, arsenic sulphide, calomel and saline laxative, with carbenzol and carbenzol soap locally. When I could get him to come to the office I used to lance the pustules and touch up the cavities with phenol followed by alcohol; but the "kid" was pretty busy at college and did not come often enough.

Last summer he was growing discouraged because we did not seem to be getting ahead, so I sent him off to the country with a full supply of calcium sulphide, alnuin and carbenzol soap. But I added calomel,

podophyllin and bilein compound twice a week and the old reliable intestinal antiseptic (W-A), enough to get complete sweetening of the bowel and maintain it all summer. The family vetoed carbenzol, refusing to sacrifice any more pillow-cases



DR. MALCOLM D. MILLER

to its staining properties. Conditions were practically the same the two summers, except for the intestinal antiseptic. This fall the "kid" returned with a clear skin. If it wasn't the "I. A." that did the work, what was it? Before the sulphocarbulates were given, the disease hung on stubbornly and the bowels were a caution for odor. As soon as the sweetening process was duly established the trouble yielded.

This is not an isolated case. I am beginning to believe that it is easier to cure almost anything with than without the sulphocarbulates. One may almost say they are always indicated.

MALCOLM DEAN MILLER.

Boston, Mass.

[And so they are—almost always! Stop the poisoning from the bowel and you will put a stop to half our ailments. Don't believe it? Did you ever *really* practise the "clean-out" and the "keep-clean" ideas? Try these things, good brother scoffer—try 'em *first*, then praise, preach or pooh-pooh, through CLINICAL MEDICINE's columns if you wish. They're open to you.—ED.]

### THE TREATMENT OF COUGHS AND COLDS

The treatment of coughs and colds depends upon the stage of the disease during which it comes under observation; since the ordinary divisions, acute, subacute and chronic, demand radically different treatment.

If seen early, most coughs and colds may be arrested at once by restoring the circulation to its natural balance and reestablishing normal secretions to the involved mucosa. The following treatment at this stage is usually abortive: Fever, a hard pulse (often full and bounding) and a hot dry skin call for *veratrine*, gr. 1-134, every half hour or hour till the patient sweats freely and the pulse softens. Then change to amorphous aconitine, gr. 1-134 every hour or two, to maintain this effect.

If congestive pneumonia with persistent chilliness is present, add one granule of atropine, gr. 1-500 to each dose of amorphous aconitine and continue this combination till the cutaneous capillaries are dilated as shown by the flushing of the face. Atropine antagonizes the primary congestion facilitates the equalization of the circulation and quickly overcomes the tendency to chilliness.

A hot foot bath should be taken with an abundance of hot drinks, the patient being thoroughly wrapped in flannel blankets to induce profuse sweating. The atmosphere of the room should be continuously charged with watery vapor. Moist hot applications to the upper part of the chest and neck, if persisted in for the first twenty-four hours, will often work wonders.

The patient often demands relief from the persistent dry, harsh cough caused by the scantiness of the secretion of the involved mucous membrane. Here the everlasting cough syrup, that, generally if not always, owes its entire efficiency to the presence of some form of opium, is only too often the usual prescription. It quiets the irritation of the inflamed mucosa and gives temporarily relief, but it does not remove the cause. Quick restoration of the normal secretion will remove the cause of irritation and with it any excuse for the exhibition of opium.

*Apomorphine Hydrochloride*, three or four granules, gr. 1-67, every half hour or hour, by the mouth, will probably restore the mucous secretions more quickly than any other single remedy or combination of remedies. It works so rapidly that the patient will be perfectly satisfied with results. Nausea or vomiting is not produced by the dose of apomorphine recommended, provided it is given by the mouth. Astonishingly large doses may be given by the stomach and not cause emesis. Apomorphine, when given in this manner relaxes inflamed, congested mucous membranes, markedly increases their secretions and produces local and general sedation.

The above measures combined with eliminative treatment, such as by calomel and podophyllin, followed by saline laxative, should abort most cases at this early stage.

Let us briefly consider the functional derangement present in the capillary circulation of the affected mucous membrane: There are many causes for coughs and colds, but the mechanical process that produces the local capillary congestion is always the same. The cause, acting through the vasomotor nervous system, results in more or less general or local contraction of the arterioles. This we call vasomotor spasm. The blood must go somewhere, and naturally it gravitates to the weakest point, the capillary circulation of some mucous membrane, and the patient reports that he has "caught cold."

As above described, many of these congestions may be aborted by early treatment.

But if twenty-four to thirty-six hours have been allowed to go by, and with it the acute reaction of the initial stage, somewhat different treatment will be required.

The capillary blood-vessels will have lost most of their power to contract, rendering abortive treatment useless. The acute condition is rapidly becoming subacute.

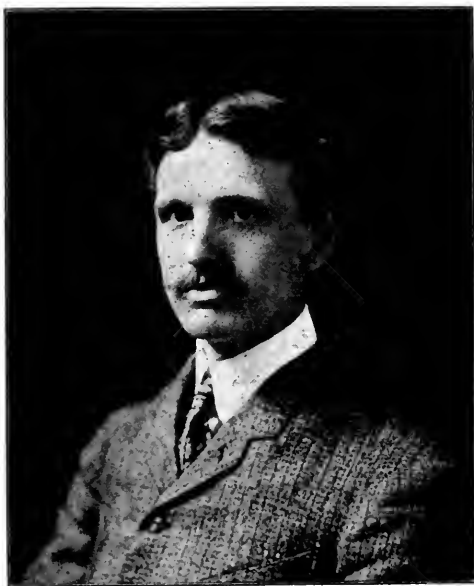
The irritation in the bronchial mucosa causes somewhat varied subjective symptoms. The cough may be dry, harsh, incessant, spasmodic, barking, with a feeling of oppression—inability to breathe freely, etc. An excess of blood and fluids in the bronchial mucosa perverts the secreting

removal of the cause of irritation. We could easily cover up this irritation by using some form of opium, but this does not remove the cause.

We have three sovereign remedies for "dry cough." If the cough is dry, harsh, hacking, persistent, with or without the sensation of soreness beneath the sternum, our greatest remedy is *apomorphine hydrochloride*, gr. 1-67. Three or four granules of this should be given every half hour or hour till cough loosens and irritation subsides, which will require only a few hours. The same condition in children may be treated also by apomorphine. A child six years old may be given one granule every half hour or hour, younger children in proportion (see Shaller's Guide). As a general rule, the writer would recommend *emetine* for children, in place of apomorphine, for the above-described conditions. A very good general rule would be, for weak adults and children use emetine; for strong adults and children, use apomorphine. If the child has capillary bronchitis, *apomorphine combined with strychnine* is much the best of all known remedies.

The dose of emetine for infants is a teaspoonful every half hour or hour, of a solution made by dissolving twelve to eighteen granules, gr. 1-67, in twenty-four teaspoonfuls of water. This dosage will apply for a child of from six months to three or four years. If fever is present, add to this solution one granule of *amorphous aconitine*, gr. 1-134, for every year of the child's age. Older children may take one or two granules of emetine every half hour or hour; cut in half if nausea.

If a dry, hard, barking cough is accompanied by a sensation of oppression, inability to breathe freely, simulating an asthmatic condition, *lobelin* is the remedy of choice, and should be given in doses of two or three granules every half hour, dissolved in hot water. It produces quick relief in all forms of irritation of the respiratory tract accompanied by a sensation of oppression. By relaxing the tissues, it favors expectoration when a large quantity of mucus is secreted and there is want



DR. E. G. PAXTON

He isn't so much of a "kid" as he looks.

functions and the respired air passing over them causes irritation of the terminal nerve endings resulting in the symptoms described above.

How shall we bring about normal secretion and permanently relieve this congestion? First: Deplete the general circulation by cleaning out the alimentary tract with calomel and podophyllin, followed by saline laxative. Second: Stimulate the mucous membrane and its glands to secrete freely, which will result in local depletion and

of power to remove it. Here it combines well with the stimulating expectorant, sanguinarine nitrate. In all catarrhal maladies of the dry type, no other remedy will so quickly produce free mucous secretions.

Another remedy worthy of special mention in this connection is *sanguinarine nitrate*. When a fresh cold affects the nares, pharynx, larynx or trachea, and there is a burning, smarting, itching sensation and an irritable, tickling cough, sanguinarine nitrate in small doses will often relieve promptly, as it acts as a vital incitor to the irritable mucous surfaces, promotes expectoration, and stimulates their functions.

For conditions affecting the smaller bronchi and the capillary tubes, *apomorphine*, *emetine* and *lobelin* are of more value than for similar conditions affecting the larger bronchi, larynx and trachea. Here *sanguinarine nitrate*, *potassium bichromate* and *iodized calcium* are in most instances to be preferred. *Sanguinarine nitrate* is a splendid stimulating expectorant, but should be used only after active inflammation has subsided. It restores the bronchial secretions when scanty and checks them when profuse.

While it is of great value in many other ways, its particular field of usefulness is in bronchitis of the very old and the very young, when the sensibility of the bronchial mucosa is low and the patient does not feel the need of coughing to rid the tract of accumulated secretions. Sanguinarine nitrate will then restore normal sensibility and cause the patient to cough harder till the accumulated secretions are expelled. Otherwise the bronchial tubes would fill up and the patient suffocate. Care must be taken not to exceed the stimulating dose and get the nausea of overdoses.

The dose of sanguinarine nitrate for bronchial affections is gr. 1-67 every hour or two till therapeutic effect or slight nausea.

*Iodized calcium*, mentioned above, has won a very high place in coughs and colds affecting the nares, pharynx, larynx and larger bronchial tubes. It has been used successfully in many cases of capillary bronchitis, where it seems to act as a re-

laxant and resolvent, liquefying the tenacious plugs of mucus, allowing the air free access to the air-cells. But apomorphine is a much better remedy for capillary bronchitis, provided it is given by the mouth, combined with strychnine, and is used early in the disease.

For colds attended by glandular swelling, the value of calcidin is unquestioned. It is also of great value for the bronchitis of bronchopneumonia and for delayed resolution of lobar pneumonia. Infants and small children may take gr. 1-3 to gr. 1 every ten minutes to four hours. The usual adult dose is one or two grains every one to four hours.

*Potassium bichromate*, like sanguinarine nitrate and calcium iodized, acts best upon respiratory troubles affecting the fauces, larynx, trachea, bronchi and smaller bronchioles. An exudate of thick, tenacious sputum, with hoarseness from a cold, accompanied by a hard, dry, irritating cough, are the special guides to its selection. Although it does not matter much what the stage of respiratory irritation may be, provided thick, tenacious sputa is present.

In the third stage of chronic pharyngitis, its exhibition will often prove a happy surprise. It is valuable as a relaxant in croup and in capillary bronchitis. The usual dose is, gr. 1-67, every half hour to two hours, the latter for chronic conditions. For chronic laryngitis three tablets, gr. 1-67, with three granules of strychnine arsenate, gr. 1-134, should be given before each meal. The writer has had some very pleasant experiences with this combination.

Locally applied, as a spray, it has proven of special value for the removal of the thick, tenacious sputa above described. Solution for spray is made by dissolving one or two tablets, gr. 1-67, for each dram of water. Add to this one or two minims of boro-glyceride for each dram of solution.

Coughs, at any time in their course, may become spasmodic in their nature. This symptom should not be treated with opium derivatives, but with some harmless anti-spasmodic. We have three much neglected remedies that meet this indication admirably. (1) *Hydrocyanic acid* has long

been valued as a remedy for spasmodic coughs, but is now seldom used because of its extreme unreliability. *Zinc cyanide* is a stable reliable salt of this acid. It should be given in doses of gr. 1-6 every hour till relief, then every two to four hours as needed. (2) *Zinc valerianate* acts in a similar manner to zinc cyanide but is of particular value when the spasmodic cough is associated with fever. The dose is one or two granules, gr. 1-6, every half hour or hour until effect. (3) *Aspidospermine* is an excellent general antispasmodic in all respiratory troubles. For spasmodic cough accompanied by dyspnea, it is our best remedy. Two or three granules, gr. 1-67, should be given every half hour or hour until effect, then as needed.

The objection to most cough syrups and tablets containing morphine or other opium derivatives, is that the dose present is entirely too large, while the doses of the corrective remedies combined with it, are too small. Such combinations given at long intervals, every three or four hours, are of little value as curative measures, and principally serve to satisfy the patient's mind and relieve symptoms temporarily. Very small doses of morphine, heroine or codeine are useful, if given at frequent intervals to desired effect. They should usually be given in combination with such correctives as emetine, apomorphine, pilocarpine, tartar emetic, or potassium bichromate. These remedies powerfully stimulate all mucous-secreting organs, preventing the objectionable effects of the opiates.

Several of the formulas mentioned below will serve as examples of such combinations of opium derivatives with the corrective remedies above mentioned.

For very small children Waugh's anodyne for infants will be found of great service as a cough sedative. Doctors who have not tried it will be astonished at the bronchial sedation produced in adults when one or two granules of anodyne for infants, or codeine, gr. 1-67, are allowed to dissolve on the tongue and absorb from the mucous membrane of the mouth and throat every five minutes for a number of doses.

Cough (Abbott): Codeine sulphate, gr. 1-67; emetine, gr. 1-67; aconitine amorphous, gr. 1-1500; amorphous hyoscyamine gr. 1-1000 is another valuable cough combination for children. It would be hard to construct a better formula for the early stages of spasmodic irritable coughs.

Calcium sulphide compound (morphine hydrochloride, gr. 1-200; pilocarpine hydrochloride, gr. 1-200; calcium sulphide, gr. 1-40); Dover's powder modified (morphine sulphate, gr. 1-134; emetine, gr. 1-250; camphor monobromated, gr. 1-12); and Cough (Blackham) (morphine sulphate, gr. 1-100; tartar emetic, gr. 1-100; emetine, gr. 1-500; pilocarpine nitrate, gr. 1-250), are formulas illustrative of the value of small doses of morphine combined with proper corrective remedies.

For coughs and colds, and practically every other disease, general *elimination is always in order*. "Clean out, clean up and disinfect," not sometimes, but always. Many remedies, that work like a charm when this is done, will otherwise fail you. Along with this treatment, give specific remedies of definite strength and action for the specific conditions present. One, sometimes two, but certainly never more than three remedies can be indicated at one time. Polypharmacy certainly should have no place in the treatment of coughs and colds. Cough syrups and compound cough tablets are the product of polypharmacy; they are unscientific, unreliable and will seldom be used by the thinking doctor. They usually contain opiates, which is another potent reason why they should be discarded. If necessary to give the single remedies in the form of syrups, dissolve them in a little hot water and then add the required simple syrup, simple elixir or glycerin.

No physician who will make a careful study of the scientific indications in respiratory troubles, for apomorphine, emetine, lobelin, sanguinarine nitrate, potassium bichromate, iodized calcium, zinc cyanide, zinc valerianate and aspidospermine, will ever return to the ways of polypharmacy.

Chicago, Ill.

E. G. PAXTON,



## CLINICAL · MEDICINE POST-GRADUATE · SCHOOL & THERAPEUTICS

George F. Butler, M. D., Director

Reynold Webb Wilcox, M. D., LL. D.  
Otto Juettner, M. D.

William F. Waugh, A. M., M. D.  
Alfred S. Burdick, A. B., M. D.

### A PERSONAL WORD WITH THE STUDENT

**H**ERE is the long-promised Postgraduate Course at last! The first lesson must, naturally, be somewhat rudimentary, and we shall repeat here many facts that are doubtless familiar to most of you. However, even these will bear repetition, and we have the suspicion that even in this introductory lesson there will be found many things which all of us can study with profit. Therefore we must urge you to go through this lesson very carefully and fix all the facts firmly in your memories.

After this lesson we shall depart more and more from the beaten track, our effort being to outline simple principles and help our students to their application. In the first few lessons we shall discuss *Remedies*, describing their physical and other

peculiarities, telling how to administer them, and the general principles involved. In the second part we shall take up their

*Clinical Application*. Those who come into the course late will be supplied with the back lessons, up to the first six months of work.

*Certificates*. — As we have announced before, we shall give a certificate to those covering a prescribed course of study. This will probably be awarded to those who complete a full year's work.

*Expense*. — Some have asked what will be the expense of this course. We answer, to subscribers of **CLINICAL MEDICINE**, *nothing*. Those, however, who desire to



DR. GEORGE F. BUTLER

Director of Clinical-Medicine Post-Graduate School of Therapeutics;  
Professor and Head of the Department of Therapeutics and Professor of Preventive and Clinical Medicine, Chicago College of Medicine and Surgery; Author of Butler's "Materia Medica, Therapeutics and Pharmacology."

know their monthly markings on their examination questions will be expected to enclose stamps enough to pay the postage.

*Examinations.*—A list of questions is given at the conclusion of every lesson. It will be noted that these are of two classes: Questions on the lesson; and research questions. Every student should answer these questions, just as briefly as compatible with clearness. Do this carefully and thoroughly. If you desire answer or criticism, send stamps as above requested. The best of the answers to the research questions will be printed in CLINICAL MEDICINE, as also any illuminating comments, suggestions or puzzling questions suitable for discussion.

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Butler's "Materia Medica and Therapeutics," price \$4.00.

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Wilcox's "Materia Medica and Pharmacy," price \$2.50.

Waugh-Abbott "Treatment of the Sick," price \$5.00.

Simon's "Chemistry," price \$3.00.

Juettner's "Modern Physio-Therapy," price \$6.00.

These can be purchased of any medical-book dealer. Consult our advertising pages.

We shall doubtless suggest other books later. Every physician should be generous with himself when it comes to the purchase of these "tools of his trade."

*Difficulties.*—If there is anything in the text that follows, or suggested in the lesson, that you do not clearly understand, let us know and we will try to help you.

*Blank to be Filled Out.*—Don't fail to fill out the accompanying Membership Blank. We want to "line you up," and know exactly where we stand.

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## PART I.—LESSON ONE

### DEFINITIONS

**Remedies.**—In a comprehensive sense every means of counteracting, curing or mitigating disease or bodily disorder may be termed a remedy, or remedial agent. The mode of treatment may be preventive, reparative or restorative; but the agents employed by the physician are properly called *remedies*. Although their number is well-nigh as great as the multifarious causes of disease, the chief classes of remedies are comparatively few, and they may be grouped mainly under the following heads:

*Prophylactic*, whereby attention is directed to the immediate environment of the patient, with a view to securing proper sanitation and outward conditions more favorable to recovery as suggested by hygienic laws.

*Sanitary*, when hygienic treatment is combined, as it now usually is, with medicinal remedies, constituting what is known

as regimen, including proper ventilation, temperature, diet, bathing and exercise.

*Imponderable*, as when the forces of light, heat, cold, electricity, etc., are brought into requisition by the aid of science.

*Mechanical*, pertaining to certain surgical methods and remedial applications, or a course in physical training, including the efficacious treatments known as Swedish movements and massage.

*Pharmaceutical*, including a very large and varied class of remedies which are technically termed medicines.

**Physiology** is the study of the functions of the different organs of the animal body under normal conditions.

**Pathology** is the study of the animal body rendered abnormal by disease.

**Pharmacology** is, strictly speaking, the science of the nature and properties of substances used as medicines, but is commonly understood to mean the study of the functions of the animal body rendered



abnormal by drugs, which is really *pharmacodynamics*, or the study of the effects of physical or chemical agencies on living organisms.

Pharmacology, from the broad point of view, includes the various fields of *materia medica*, medical botany, medical zoology, pharmacognosy, pharmacodynamics and pharmacy.

**Materia Medica** deals especially with the sources from which drugs are derived, their chemical and physical properties, their constituent elements, and their general function as substances or agencies in the practice of medicine.

**Pharmacognosy** is a division of *materia medica* and includes the technical study of the crude materials from which animal and vegetable drugs are derived.

**Pharmacy** is restricted to the analysis and determination of drugs, the manipulation by which the active constituents of drugs are rendered available for therapeutic purposes and the art of preparing and dispensing medicines in the best forms for administration.

**Therapeutics** is the art and practice of selecting and applying remedies for sickness and disease, with a view to restoring the individual to his normal condition; or, if such is impossible, the giving of comparative comfort to the invalid. Its range of activity, therefore, is very wide, and a combination of methods is necessary to the resourceful physician. The following general modes of treatment should be considered:

*Psychotherapy* or *Suggestion Therapy* is that mental suggestion or helpful influence on the part of the physician that inspires the patient with faith, confidence and hope, and helps him to gain mastery over himself, to strengthen his will and bring out his latent forces, and, in fine, to build up his individuality. To be successful there must be a harmonious mentality existing between the physician and the patient. This is a subject which should be thoroughly understood by every practising physician and much more time should be given to its study than has heretofore been given

to it by the profession as a whole, or by medical authors and teachers.

*Climatotherapy*, the influence of climates on various diseases.

*Aerotherapy*, exposure to the open air, moist air, dry air, superheated air, etc.

*Dietetic therapy*, including the various diets employed in disease.

*Heliotherapy*, exposure to Finsen's rays, x-rays, or the entire refracted sun's rays.

*Physicomechanical Therapy* includes mechanical vibration and many other useful mechanical procedures.

*Kinesotherapy*, including massage and Swedish movements.

*Hydrotherapy*, is the therapeutic application of water to the body, involving the use of heat and cold with modified massage.

*Hypodermatoclysis*, the introduction into the subcutaneous tissues of certain quantities of normal saline solution, and *enteroclysis*, the injection of nutrient material into the intestine, or any rectal enema, are both special and valuable forms of hydrotherapy.

*Electrotherapy* is the application of electricity in various forms to the treatment of certain abnormal conditions.

*Pharmacotherapy* includes the study of medicines proper, or the use of drug-substances in the treatment of disease or abnormal bodily states. Certain arbitrary methods have received special names, such as Empirical, Specific, Statistical, Physiological, Rational Therapeutics, etc.

#### WEIGHTS AND MEASURES\*

For commercial purposes the following weights and measures are employed:

*Avoirdupois Weights*: The pound, divided into 16 ounces.

*Liquid Measures*: The "Wine Measure," of which the U. S. gallon represents a volume of 231 cubic inches, each cubic inch of water at the maximum density (4° C.) being equivalent to 252.892 grains, the weight of a gallon being, therefore, 58,418 grains. The gallon is divided into 8 pints, and the pint is divided into 16 fluidounces,

\*Adapted from Butler's "Textbook of Materia Medica, Pharmacology and Therapeutics."

each ounce containing 8 fluidrams, or 480 minims, the fluidram containing 60 minims.

#### APOTHECARIES' (TROY) WEIGHT

20 grains	.....1 scruple (scr.) or scrupulum
60 grains, or 3 scruples	.....1 dram (dr.) or drachma
480 grains, or 8 drams	.....1 ounce (oz.) or uncia
5760 grains, or 12 ounces	.....1 pound (lb.) or libra

#### APOTHECARIES' (WINE) MEASURE

60 minims (M.)	.....1 fluidram
480 minims, or 8 fluidrams	.....1 fluidounce
7680 minims, or 16 fluidounces	.....1 pint (O.) or octarius
61,440 minims, or 8 pints	.....1 gallon (G.) or congius

This lack of uniformity in the units and the denominations of the three systems of weights and measures is exemplified in the subjoined table. While the two weight systems have a unit in common—the grain—there is no correlation in the higher denominations—ounces and pounds. The desirability of adopting a fixed standard applicable in all cases where great accuracy in weights and measures is requisite has been frequently emphasized by writers on therapeutics. As we have premised, the present difficulty forms a cogent argument in favor of the metric system, as adopted in the United States Pharmacopeia. A remarkable disparity is shown in the liquid measures in which there is no unit in common; a minim is not a grain, nor “a pint a pound the world round.”

1 ounce, avoirdupois	..... 437.5 grains
1 ounce, troy, or apothecaries'	..... 480 "
1 fluidounce of water (the standard of volume)	..... 455.7 "
1 pound, avoirdupois	..... 7000 "
1 pound troy, or apothecaries'	..... 5760 "
1 minim of water	..... 0.95 "
15 grains of water	..... 16 minims

In the metric system, as seen below, there is but one group of weights, and these bear a definite relation to volume; for one cubic centimeter of water, the standard of volume, weighs exactly one gram.

#### THE METRIC SYSTEM

The starting point of the metric system is the unit of length, the *meter* (metre), which is the 40,000,000th part of the earth's circumference equidistant from the poles. From this apparently irrelevant measure of length the unit of capacity, or volume, the *liter*, was established, it being the cube of 1-10th of a meter. With equal simplicity and clearness was derived from the meter the unit of weight, the *gram*, which is the weight of that quantity of pure water at the maximum density, 4° C. (39.2° F.)

which will fill the cube of 1-100th part of a meter (cubic centimeter).

The metric system is also known as the decimal system, because its multiples and subdivisions are obtained by ten (Latin *decem*).

#### METRIC TABLE OF LENGTHS

The measures of length employed in prescription writing are the millimeter, centimeter, decimeter and meter.

10 millimeters	make 1 centimeter
10 centimeters	" 1 decimeter
10 decimeters	" 1 meter
1 millimeter, written 1 Mm. or M. 0.001,	is equal in inches to .039370432, or approximately 1-25
1 centimeter, written 1 Cm. or M. 0.01,	is equal in inches to .39370432, or approximately 2-5
1 decimeter, written 1 dm. or M. 0.1,	is equal in inches to 3.9370432, or approximately 4
1 meter, written 1 M. or M. 1.,	is equal in inches to 39.370432, or approximately 40

#### METRIC TABLE OF CAPACITIES

The only measures of capacity employed in prescription writing are the cubic centimeter and the liter. 1,000 cubic centimeters (Ccm. or Cc.) make 1 liter (L).

#### METRIC TABLE OF WEIGHTS

The weights employed in prescription writing are the milligram, centigram, decigram, gram and kilogram. The other terms in the following table are but rarely employed abroad and never among English-speaking physicians. It will be seen that one kilogram represents 1,000 grams.

10 milligrams	make 1 centigram
10 centigrams	" 1 decigram
10 decigrams	" 1 gram
10 grams	" 1 dekagram
10 dekagrams	" 1 hectogram
10 hectograms	" 1 kilogram
10 kilograms	" 1 myriagram

*Abbreviations* for the different divisions and multiples of the gram, with their corresponding equivalents in grains, are as follows:

1 milligram, written 1 mg. or Gm. .001,	equals in grains (1-65)
1 centigram, written 1 cg. or Gm. .01,	equals in grains (1-6)
1 decigram, written 1 dg. or Gm. .1,	equals in grains 1.5432
1 gram, written 1 Gm. or Gm. 1.,	equals in grains 15.432

In writing prescriptions a physician uses but one system, either the metric or the apothecaries'; therefore, to *write* prescriptions properly he does not need to know how to convert one system into the other. He learns one system and adheres to that.

But to *read* and *understand* prescriptions written or spoken in the system other than the one he employs, he must translate them

into his own system; and this requires a knowledge of equivalents. Knowing the approximate equivalents it is then merely a matter of multiplication or division to convert a prescription of one system into a prescription of the other system.

*Examples of conversions are:*

1 milligram—1-65 grain; 5 milligrams—5-65—1-13 grain  
1 grain—0.065 Gm., therefore 2 grains—2 x 0.065 Gm.—0.13 Gm., and 1-100 grain—1-100x0.065 Gm.—0.0065 Gm., etc.  
1 ounce—30.0 Gm.; 4 ounces—30.0 x 4—120.0 Gm.

Approximate and exact equivalents of weights, measures, lengths, in the two systems are:

WEIGHTS	APPROXIMATE	EXACT
1 milligram, 0.001 (Mg)	1-60 or 1-65 grain	0.0154 grain
1 centigram, 0.01 (cg)	1-6 or 10-65 grain	0.1543 "
1 decigram, 0.1 (dg)	1-1-2 grains	1.5432 "
1 gram, 1.0 (Gm)	15 grains	15.4324 "
30 grams, 30.0 (Gm)	1 ounce	462.9 grains
31 grams	1 oz. troy or 48.0 grs.	478.4 "
1 grain (gr. i)	0.065 or 0.06 Gm.	0.065 Gm.
10 grains (gr. x)	0.65 or 0.7 Gm.	0.648 "
15 grains (gr. xv)	1.0 Gm.	0.972 "
1 scruple (scr. i)	1.3 Gm.	1.206 "
1 dram (dr. i)	4 Gm.	3.89 "
1 ounce, troy (oz. i)	30 or 31 Gm.	31.1 "
1 ounce, avoirdupois (oz)	28 Gm.	28.35 "

## PRESCRIBING

### *Estimation of Amounts in a Prescription*

When the various ingredients which are to enter into a prescription have been determined the next consideration is the amount of each desired. The bottles found in drugstores have capacities of 1, 2 and 4 fluidrams, and 1, 2, 3, 4, 6, 8, 12, 16, and 32 fluidounces, or 4, 8, 15, 30, 60, 90, 120, 240, 500, and 100 Cc.; and it is always advisable to prescribe mixtures of these sizes, if mixtures are prescribed at all; otherwise the patient may fear some error from receiving a bottle only partly full, as when a 10-ounce mixture is placed in a 12-ounce bottle.

As a rule it is better to prescribe small quantities rather than large ones, ordering no more of a medicine than the patient will probably need until the next visit.

Having decided, then, how many doses to order, and the dose of each ingredient, it is a simple matter of multiplication to figure how much of each ingredient shall go into the prescription.

The following is a very simple rule for estimating amounts in apothecaries' measure:

In an 8-ounce mixture, the dose being one dram, take as many drams of the medicine as there are wanted minims or

grains to the dose. It will be observed that in this case the basis is an 8-ounce mixture, yet it typifies the rule which, when thoroughly understood, may be easily applied to a 4-ounce or a 2-ounce mixture, by taking one-half or one-fourth as many drams; while if the dose is to be a dessert-spoonful, or two drams, it is only necessary to take one-half as many drams to an 8-ounce mixture, reducing for smaller mixtures in accordance with the rule. If the dose be a tablespoonful, or four drams, one-fourth as many drams must be taken to an 8-ounce mixture as there are minims or grains to the dose. This rule, while not fractionally exact, is sufficiently accurate for all practical purposes.

Examples: We desire to give an 8-ounce mixture with one dram for a dose, each dose to contain 12 grains of potassium bromide and 10 grains of chloral, the vehicle to be syrup of orange and water. We have here, then, 64 doses of a dram each. To be exact, therefore, we should have 768 grains of potassium bromide, or 12 drams and 48 grains, but following the rule, we put in the mixture 12 drams, since we desire 12 grains to the dose. Of chloral we would require exactly 640 grains, or 10 drams and 40 grains, but we use the round number, 10 drams in the mixture. We see that in each case there is but the fraction of a grain short in the dose.

The prescription would consequently be written as follows:

Potassii bromidi .....drams. 12  
Chlorali hydrati .....drams. 10  
Syrupi aurantii .....floz. 4  
Aque, q. s. ad.....floz. 8  
M. et. Sig.: Teaspoonful for a dose.

If only a four-ounce mixture were desired with the same dose of each medicament, then but 6 drams of potassium bromide and but 5 drams of chloral hydrate should be added to the mixture; for a 2-ounce mixture but 3 drams of potassium bromide and 2 1-2 drams of chloral would be required.

Or if we wish the medicaments in greater dilution, we may halve the amounts and double the dose, as follows:

Potassii bromidi .....drams. 6  
Chlorali hydrati .....drams. 5  
Syrupi aurantii .....floz. 4  
Aque, q. s. ad.....floz. 8  
M. et. Sig.: A dessertspoonful for a dose.

The amount of each ingredient thus varies with the size of the mixture, and inversely as the dose—i. e., the larger the mixture the greater the amount of the ingredients, the dose being the same; and the larger the dose the smaller the amount of the ingredients, the size of the mixture remaining the same.

*Measures Used in Administration.*—The next thing to be determined is the manner in which the medicine should be measured out to the patient for internal use. A graduated medicine glass is always preferable to a domestic measure and should be employed in all cases. Teaspoons, as well as dessertspoons and tablespoons, vary considerably in size. A teaspoonful, considered to be equivalent to one fluidram, may contain from one-half to two fluidrams; a dessertspoonful, which should be equivalent to two fluidrams, and a tablespoonful, equal to one-half fluidounce, vary almost as much in quantity. This is only one of many reasons why the galenical remedies, too often variable in strength and undependable in dosage, may prove disappointing. Absolute accuracy of dosage is well-nigh impossible in liquid mixtures, especially as ordinarily given; with very potent remedies this is a most important consideration.

Ordinarily it is unwise to prescribe medicines to be dropped out, since a drop varies greatly in dimensions, according to the viscosity and specific gravity of the fluid, the shape, size and character of the neck, and lip of the bottle, and the steadiness of the hand in dropping. Medicine droppers are equally unreliable.

*Drops*, therefore, are *not accurate measures*. Sometimes, however, it is desirable to order medicines in drops, and then it is well to remember that aqueous liquids and fixed oils drop about one drop to the minim, and volatile oils and alcoholic liquids, such as tinctures and fluid extracts drop about two drops to the minim.

There are exactly 60 minims to any fluid in 1 fluidram, while 60 drops may be greater or less than 1 fluidram, as the following list shows:

	DROPS IN FLUIDRAM (60 M)	W'THS OF FLUIDRAM GR.	GM.
Carbolic acid .....	111	59	3.82
Aromatic sulphuric acid .....	146	53	3.43
Ether .....	176	39	2.52
Chloroform .....	250	80	5.18
Creosote .....	122	56 1-2	3.66
Fluidextract belladonna .....	156	57	3.69
"    colchicum root .....	160	55	3.56
Compound solution iodine .....	63	59	3.82
Fluidextract digitalis .....	134	62	4.01
Fowler's solution .....	57	55	3.56
Oil of cloves .....	130	37	1.69
Croton oil .....	104	50	3.24
Aromatic spirit of ammonia .....	142	48	3.11
Syrup iodide of iron .....	65	77	4.08
Compound syrup of squills .....	102	70	4.53
Tincture aconite .....	146	46	2.98
"    belladonna .....	137	53	3.43
"    cantharidis .....	131	51	3.33
"    iron chloride .....	150	53	3.43
"    nux vomica .....	140	44	2.85
"    opium .....	130	53	3.43
"    veratrum .....	145	46	2.98
Wine of colchicum seed .....	111	54	3.49

**Incompatibility.**—When different substances, whether liquid or solid, are combined or associated and undergo a more or less complete change, they are said to be incompatible, the incompatibility consisting of two kinds; chemical and pharmaceutical. Drugs that are opposed in their physiological action are spoken of as antagonists.

The commonest forms of *chemical incompatibility* occur under the following conditions:

1. When a new and insoluble salt is formed, resulting from a mixture of solutions of soluble salts. Example (1): Mixing solutions of lead acetate and zinc sulphate, both soluble salts, but producing by chemical decomposition a new and insoluble salt, the sulphate of lead; which is precipitated.

2. By the addition of a strong acid to solutions of salts of weak or volatile acids, such as carbonates and bicarbonates, with resulting decomposition. As a matter of fact acids and alkalis, and substances containing them, should rarely be combined. Example (2): Ammonium carbonate, the salt of a weak acid radical, added to syrup of squill, containing acetic acid, causes decomposition to take place, with effervescence and the liberation of carbonic-acid gas.

3. Salts of a feeble or volatile base are decomposed by the addition of a strong alkali. Example (3): The evolution of ammonia when a strong alkali is added to ammonia alum, and when chloral hydrate

is decomposed by alkalis, such as aromatic spirit of ammonia, lime solution, etc.

4. Alkaloids, or their salts, are thrown out of solution or precipitated from their solutions by the addition of alkalis or alkaline salts; also by tannic acid, the salicylates, benzoates and bichromates, iodine, bromine, the iodides and bromides, corrosive sublimate and other mercury salts. Example (4): Strychnine sulphate in solution is precipitated as the insoluble strychnine bromide by the addition of a larger proportion of potassium bromide. Quinine sulphate is precipitated as insoluble quinine acetate when mixed with a solution of potassium acetate.

5. Tannic and gallic acids and preparations containing them, as well as many other vegetable acids, produce discoloration or precipitation of iron and many of its compounds. Tannic acid is incompatible with the alkaloids. Example (5): Ink is the best illustration of this incompatibility. Writing fluids are usually combinations of tannic or gallic acid with some preparation of iron. Add the tincture of chloride of iron to tincture of cinchona and notice the discoloration.

There are certain preparations of iron like the compounds with ammonium or sodium citrate (see *tinctura ferri citrochloridi* N. F., tasteless tincture of iron) which produce little discoloration with vegetable astringents, and none at all with vegetable preparations containing tannic or gallic acid.

6. Iodine and the iodides and mercuric chloride (corrosive sublimate) are not well-suited to combination. Not only do they precipitate many of the alkaloids, but they enter into combinations with many of the metals and other substances.

7. Oxidizing agents, such as potassium chlorate and permanganate, should not be mixed dry with reducing agents, such as sulphur, sugar, tannic acid, glycerin, etc.

Other incompatibilities will be brought out in the discussion.

*Pharmaceutical Incompatibility* is the production of a sediment by change of solvent without chemical action. Examples: Veg-

etable tinctures of resinous drugs with water, such as tincture of guaiac and water, copaiba and oils with aqueous preparations, spirit of camphor with water, spirit of nitrous ether with mucilage of acacia, etc. The separation or precipitation may frequently be prevented by the intervention of some viscid substance, such as syrup, glucose, glycerin, mucilage of acacia, etc.\*

**Antagonists.**—Antagonists are drugs which are opposed to each other in their physiological effects.

No general rule can be laid down for the avoidance of antagonism. Some of our most valuable drugs contain active principles which are physiologically opposed to each other in their action: instance, *jaborandi*, which contains two absolutely antagonistic alkaloids, *pilocarpine* and *jaborine*. This is a commonly repeated illustration of the absurdity of some galenic preparations—and it shows why they often unexpectedly fail.

Opium is a conspicuous example of a complex remedy, containing besides gum, sugar, etc., eighteen different alkaloids, two neutral principles and two peculiar acids; so that a prescriber of the crude drug opium, while he may, perhaps, flatter himself that he is conforming strictly to pharmaceutical simplicity, is in effect a polypharmacist of most pronounced type. Moreover, not only are the constituents of opium very numerous, but, like others mentioned, the drug affords in its thebaine and morphine a further illustration of direct physiological antagonism.

Again, physiological antagonists are often given together; as atropine and morphine, or aconitine and digitalin in certain cases of cardiac arrhythmia, or as in the case of the invaluable "defervescent compound" containing aconitine, digitalin and veratrine.

We cannot too strongly recommend that physicians ignorant of the action of drugs, if they prescribe at all should avoid including many remedies in one prescription.

\*NOTE: A complete reference list of the common incompatibilities of individual drugs may be found in Butler's "Textbook of Materia Medica, Therapeutics and Pharmacology."

But, given a competent and thorough knowledge of the action of drugs, the exact condition of the patient, and the things to be accomplished with the remedies employed, the physician is justified in giving more than one drug at once, since if he is perfectly familiar with the several remedies, he can foretell with nicety the effect to be produced by their combination. In all cases a physician should be as certain of the action, strength and reliability of the drugs he administers as the surgeon of the aseptic condition of his hands and instruments.

#### MEDICINAL AGENTS

**Galenics.**—Medicines are said to be galenic, (a) when they are of vegetable origin and not chemic or spagyric; (b) when they are designed for the use of human patients, and are not veterinary, (c) the term is often nearly equivalent to officinal, or official, in the modern sense of the word.

*Officinal* drugs are those prepared or kept by the druggist upon his own responsibility, bearing only the authority of the shop (*officina*, a shop). Such preparations are often included in works on *materia medica*, and, together with those emanating from other individual formulæ, are called "unofficial."

The term "unofficial" it will be seen is a solecism; and it follows, moreover, that there are many preparations which are in pharmacy officinal, but not official, and that a pharmacopeial formula cannot possibly be officinal; although, speaking generally, all official drugs are officinal in that they are kept or prepared in the druggist's shop.

*Official* drugs are those which bear the stamp of professional—i. e., official sanction (*officinum*, authority). They are practically ordered by the Pharmacopeia to be kept in all druggists' shops. A "Pharmacopeial preparation" is an "official preparation."

**Pharmacopeia**, a book compiled by the government, or, as in the United States, a National Committee on Revision, and published by authority, establishing standards for the identification, purity, strength and quality, and giving directions for the puri-

fication, valuation, preparation, compounding and preservation of drugs, chemical and medical substances. By legislative enactment it is made a legal authority within the jurisdiction of many states. The United States Pharmacopeia is revised decennially; the present or eighth edition, which is the first to contain doses, became official on September 1, 1905.

**Dispensatory.**—This is a compilation of and commentary on one or more pharmacopeias, enlarging the authoritative but restricted pharmacopeial formulæ by including the medical and physical history of the various substances, with directions regarding dosage, together with observations on their physiological action and therapeutics. It also contains information concerning drugs not accepted by pharmacopeial authority, yet which are of occasional use or interest. The Dispensatory is in effect a private publication and unofficial, in this respect differing essentially from a pharmacopeia.

**The National Formulary** is a work published under the direction of the American Pharmaceutical Association, and designed to standardize the formulæ of such much employed preparations as are not included in the United States Pharmacopeia. Its preparations are not recognized as official, comprising largely imitations, adaptations and improvements upon the formulæ of the most widely used and generally popular proprietary remedies.

The following are the abbreviations used to indicate which of these is the authority for any given formula, or which formula is intended when more than one go by the same name:

U. S. P.	United States Pharmacopeia	!
B. P.	British Pharmacopeia	!
P. G.	German Pharmacopeia	!
N. F.	National Formulary	!
U. S. D.	United States Dispensatory	
N. S. D.	National Standard Dispensatory	

#### *Galenical Preparations*

The Pharmaceutical preparations may be divided as follows:\*

\*NOTE: We refer to Wilcox's *Materia Medica* and Pharmacy, which gives everything necessary for a physician to know about medical pharmacy.

- I. Solutions
- II. Liquid mixtures—internal
- III. Extractive preparations—liquid and solid
- V. Mixtures for external use—liquids and solids
- IV. Mixtures of solids—internal

The various pharmaceutical preparations are the outgrowth of efforts to render medicines more palatable, active and efficient. Vegetable drugs owe what medicinal value they have to certain active principles, so-called, and it has been the constant aim of pharmacists to prepare tinctures, fluid extracts, extracts, etc., in such a manner as to retain the largest possible amount of the active medicinal principles of a drug to the exclusion of the inert substances.

The *standardization of vegetable drugs* was a great advance in pharmacy. This is to specify an upper or lower limit, or both, of the active constituents which a drug or its preparation must contain in order to be official, and prescribing an appropriate process for its determination. It is very difficult to establish satisfactory processes for standardizing drugs and preparations, and it is particularly unsatisfactory when the preparation contains a number of alkaloids of opposed action, since the article is usually standardized to total alkaloids, or to the most important alkaloid.

In practice it would be better for the physician to give the active principle itself than even a standardized preparation said to contain a certain percentage of the active constituent.

The *Active Principles of Vegetable Drugs*, or those substances to which the chief or whole medicinal properties of the drug are due, are

### PROXIMATE PRINCIPLES

**Alkaloids.**—These are organic substances, containing nitrogen, having properties resembling alkalis, and acting as bases, uniting with acids to form salts which are usually crystallizable. Chemically, alkaloids are either amides or amines. If the former, they are composed of carbon, hydrogen, nitrogen and oxygen; if the latter, the oxygen is wanting. The oxygen-free alkaloids are volatile liquids; to this class belong such alkaloids as cicutine, nicotine and sparteine. Please note carefully that

the amide alkaloids are solid and odorless, while the amine alkaloids are liquid, volatile and have an ammoniacal odor.

A solid alkaloid may be either *crystalline* or *amorphous*, the latter meaning simply noncrystalline. Many of the amorphous alkaloids are more or less impure, or of uneven quality from admixture with inert substances or other active principles.

Alkaloids either exist in the plant as proximate principles, or are derived from other alkaloids. Putrefactive alkaloids, or ptomains, are formed in the animal economy, but are not of therapeutic interest—though a factor in disease.

Alkaloids are for the most part insoluble in water, but are usually soluble in alcohol, chloroform, benzol, benzin and frequently in ether. Their salts, on the other hand, are mostly soluble in water, less so in alcohol, but insoluble in chloroform, ether, benzin and benzol. On account of their water-solubility the salts are commonly used, though when they are to be dissolved in oils or fats or in ethereal liquids, as collodion, the free, basic alkaloids are to be used. They have a bitter taste, making it undesirable to give them in solution. Their English names terminate in *ine*, their Latin names in *ina*. Alkaloids are unquestionably the most important of all organic compounds used in medicine, being the most active and important medicinal constituents of plants.

Examples in U. S. P.: Aconitine, atropine, cocaine, morphine, strychnine.

**Glucosides.**—Glucosides are sometimes the only active principles of the plants in which they are found, but are often associated with resins, oils, alkaloids and bitter principles. When they are heated with a diluted mineral acid, or are acted upon by a ferment, they split up into glucose and some other substances (alcohols, aldehydes and phenols). With few exceptions they contain no nitrogen. Their English names terminate in *in*, their Latin in *inum*.

Among those plant-principles known as *neutrals*, not glucosides, may be named santonin, picrotoxin, elaterin, aloin, glycyrrhizin.

Examples of glucosides in U. S. P.: Salicin, strophanthin.

**Amaroids, or Bitter Principles.**—These are bitter extractive principles but of such varied nature they do not admit of any chemical diagnosis. The term also includes all distinctly bitter extractives of definite chemical composition, other than alkaloids and glucosides. Their English and Latin terminations are the same as for glucosides. Glucosides and amaroids are not the only principles, however, whose names end in *in*.

**Resins** are of very indefinite composition. They are natural or induced solid or semi-solid exudations from plants, mostly uncrystallizable, fusible, insoluble in water, generally soluble in alkalis and volatile oils, and also in one or more of the following: Alcohol, ether, chloroform and fixed oils. Examples in U. S. P.: Resina jalapæ, podophylli and scammonii.

**Concentrations.**—There is one class of remedies known as "concentrations." These are not definite chemical compounds nor, strictly speaking, active principles of plants, although commonly referred to as such and, indeed, serving as such in practice. It is difficult to define these concentrations, excepting to say that they contain the virtues of the drug-plant in a concrete and condensed form, and while indefinite mixtures, a large proportion of inert matter (plant-dirt) has been excluded by peculiar manipulations. The earliest of these concentrations were what were then called the "resinoids." Like the preceding principles their names end in *in* (Latin, *inum*). Cactin, juglandin and hydrastin are examples.

**Oleoresins** are natural solutions of resins in volatile oils. Examples in the U. S. P.: Oleoresina aspidii, capsici, cubebæ, lupulini, piperis and zingiberis.

**Gum-resins** are natural mixtures of gum and resin, being usually exudations from plants. Examples in U. S. P.: Asafoetida, myrrha, scammonium.

**Balsams** are resinous substances, liquid or soft, and contain an odorous principle and benzoic or cinnamic acid, or both.

Examples in U. S. P.: Balsamum peruvianum and toluatum, benzoinum, styrax.

**Volatile or Essential Oils** are usually the odorous principles of plants, preexisting in the plant or being produced by the reaction of certain constituents upon being brought in contact with water. Their composition varies greatly and they may be divided into four classes: (1) Terpenes, consisting of carbon and hydrogen: e. g., oil of turpentine. (2) Oxygenated, containing oxygen; e. g., oil of eucalyptus. (3) Sulphurated, containing sulphur; e. g., volatile oil of mustard. (4) Nitrogenated, containing nitrogen; e. g., oil of bitter almond.

**Fixed Oils** are esters of the higher fatty acids which at ordinary temperatures remain liquid. The fatty acids commonly entering into their composition are oleic, palmitic and stearic. Examples in U. S. P.: oleum morrhue, olive, ricini, tiglli.

## THE ALKALOIDS

As before stated, the alkaloids are without doubt the most active and potent of all the active principles. They have the advantages of being concentrated, uniform in strength and reliable in action.

**Concentrated and Easily Absorbed.**—The hesitation which some physicians show to use the alkaloids in their general practice seems strange when we consider that for their hypodermic injections they employ exclusively these active substances that are chemically defined; and that, for this purpose, they never use tinctures, extracts (solid or fluid), decoctions or electuaries. Why should the cellular tissue be given the prerogative of a treatment by simple, active substances, easily absorbable, while the gastrointestinal mucous membranes are rudely attacked by gross, irritating, or often inert and unreliable substances whose absorption often is extremely difficult?

**Exactness.**—Most of the advantages (and there are many) hinging upon the use of the alkaloids as medicines arise from their exactness. A pure alkaloid being always precisely the same thing, it follows that the administration of any given



quantity of that alkaloid will occasion exactly the same effect upon the patient. For this reason the physiologic experimentation upon which the scientific use of drugs is mainly based was made exclusively with the alkaloids as agents, it being impossible to obtain definite, uniform results from agents which were not themselves uniform. This fact, therefore, gives the clinician, in the first place, a precise knowledge as to the nature of his drug, and of what it will do when it is administered to a patient.

There remains, of course, as a problem to be solved, the exact condition of the patient, this constituting the art of diagnosing. When we know exactly what our drug will do, it is up to us to ascertain with the utmost exactness in our power, the condition of the patient. We may then apply our exactly acting drug with unvarying accuracy.

**Ease of Administration, Rapidity of Action, Palatability.**—Other less important but still weighty considerations are the smallness of the dose, its ease of administration, its quick solubility and absorptibility, its consequent speed in getting to work, and lastly, the palatability—the unpleasantness of most medicines being dependent upon the inert and useless ingredients by which the active principles are accompanied.

**Less Tendency to Nausea**—In addition there must be considered the absence of the consequent nausea that tends to interfere with the retention and absorption of the remedy.

The soluble salts of the alkaloids can be quickly administered hypodermically when speed is essential. The quickness of the action permits a closeness in getting to work, which will in many instances give much more favorable results of the treatment than when slowly acting, uncertain remedies are administered in the beginning of acute disease. While the alkaloids and other active principles were primarily administered as substitutes for the cruder preparations of the plant from which they were derived, their use has practically developed a new

art of therapeutics, based not on the crude drug but on the active principles themselves, whose employment has enabled physicians skilled in their use to accomplish tasks promptly that they would not have dared to attempt with the older, less efficient and uncertain methods at their command.

For these reasons the art of applied therapeutics assumes a totally different aspect to the physician who is proficient in the use of active principles, as compared with the position he occupied before commencing the use of these agents. It is for this reason that the language of the user of active principles seems unwarrantably enthusiastic to those who have not yet become familiar with these agents and the method of treatment made possible by their employment. Hence no one has a right to judge of this matter until he has familiarized himself with the actual employment of these agents.

#### PHYSIOTHERAPY (PHYSICAL THERAPEUTICS)

The various nonmedicinal therapeutic methods which are being so largely employed, even by general practitioners, nowadays, are classified under the general title of "physiotherapy." The latter term embraces the different methods of treatment that have been variously designated as "physical therapeutics," "physiological therapeutics," "mechanical therapeutics," etc. All these special names are open to objections of one kind or another. The term *physiotherapy* has been generally accepted and adopted in Europe. It includes all therapeutic methods other than drug-giving, and suggests in its very name the rationale of the therapeutic methods to which it refers, to wit, the employment of natural (the Greek word "*physis*" meaning "nature") forces and agencies, including air, light, water, heat, food, etc. The significance of the word "natural" in its physiotherapeutic sense will become more apparent as we progress in our discussion.

There are four distinct groups of therapeutic methods included under the general head of physiotherapy, to wit:

### 1. Strictly Physiological Methods.—

By a physiological agent is meant a force that is contained and constantly at work in the living animal body. It is the sum-total of these forces in the body that keeps the physiologic machinery of the organism in motion. Our knowledge of the conditions under which life is possible and health established and preserved, enables us to define the laws of health (*hygiene*, from the Greek word "*hygieia*," which means "health"). If disease in any given case is due to the nonapplication or misapplication of a hygienic law, the cure of the disease would—other things being equal—consist in intelligently dealing with the cause of the trouble. Enforce the application of the law which has been violated, correct the hygienic or dietetic error and in this way restore one of the conditions of health. This is pure physiological therapy. Strictly physiologic therapeutic agents are suggested by our knowledge of hygiene and dietetics, including factors which are closely allied to either, e. g. climate, compressed air, individual feeding, etc. These strictly physiologic methods are preventive as well as curative.

### 2. Strictly Physical Methods.—A

physical agent is an extraneous force which is capable of acting upon the animal organism, such as light, heat, electricity, etc. We say an *extraneous* force because its source of origin and sphere of activity is the vast domain of nature and it acts upon the body only incidentally. We may conveniently recognize four different varieties of these physical agents, to wit:

(a) *Heat*, or a relative degree of temperature. It may be any degree of temperature from extreme cold to extreme heat. Since the idea of high or low temperature is inseparable from the agent which carries the temperature (e. g. water, air), we classify the subject of heat in keeping with the agent which is employed to carry the temperature. Thus we get the therapy of cold, warm or hot water and air (thermo-, hydro-, aero-, thermotherapy) as distinct subdivisions of the subject.

Hydrotherapy is primarily a *physical* method because of the physical character

of the agent (heat or cold) and its carrier (water). In a secondary sense, hydrotherapy is also a true *physiologic* method, because it enables us to influence the process of blood-circulation and, through the latter, the process of organic combustion (heat-production, oxidation, metabolism) in the animal economy. In this secondary sense many other therapeutic methods may be called physiologic. It is this fact which has given rise to the unfortunate confusion in the use of the ill-coined term "physiologic therapeutics."

(b) *Electricity* in its manifold forms of manifestation. The great importance of electricity in almost every field of human activity, together with the sensational advent of the mysterious Roentgen-rays, has pushed electricity in the foreground of professional interest as a therapeutic agent. Abstracting from the irresponsible claims made by enthusiasts, there is no doubt that the various electrical modalities have a place in therapeutics and are of the greatest clinical value, if applied by a resourceful mind and a skilled hand. The electrical modalities of greatest value are the following: *galvanism* (constant currents), *faradism* (interrupted currents), *frictional* (static) currents and the so-called *high frequency* currents.

(c) *Light*, or the demonstrable radiations of the sun. The light of the sun is a compound of various forms of radiating energy, as shown by the composition of the so-called "solar spectrum." The employment of the energy of the solar spectrum or any part of it in the treatment of disease is *phototherapy*. This energy may be produced artificially. The electric arc-light and the incandescent light resemble the sun in some features of their spectra. The solar spectrum contains seven visible fields, to wit: red and orange (both largely calorific, thermic or heat-producing), yellow and green (both largely luminous or light-producing), blue, indigo and violet (chemical or actinic rays). All artificial sources of light contain some parts of these spectral rays and are classified under the head of phototherapy. Ultraviolet rays represent a

part or the invisible part of the solar spectrum and belong likewise to phototherapy.

(d) *Nonspectral radiations* represent mysterious forms of energy whose natural history is largely a matter of speculative knowledge. These radiations, so far as we know, do not belong to the solar spectrum. The best known examples of nonspectral radiations are the Roentgen-rays and the waves of energy emanating from radioactive substances like radium. There are many other forms of radiating energy in nature whose presence and physical characteristics are as yet only a matter of speculation, although knowledge along these lines is rapidly being acquired in these days of wireless telegraphy and other wonderful discoveries. The *n*-rays, the radiating forces emanating from the living human body and, in fact, from all organic matter, the waves of animal magnetism, suggestion and hypnotism represent forms of radiating energy that engage the molecules of ether and are thus carried from generator to receiver, from nerve-cell to nerve-cell, from organic molecule to organic molecule. There can be no doubt nowadays concerning the physical basis of suggestive and other mental phenomena. The therapeutic use of all non-spectral radiations are classified under the head of *radiotherapy* (Roentgen-rays, etc.). For the sake of completeness let us add the therapeutic uses of sound-waves (therapy of music).

3. **Mechanical Methods** consist in some form or other of manipulation of the tissues of the body by means of the hand or an instrument to take its place (massage, Swedish movements, vibration, oscillation, Bier's hyperemia, etc.).

4. **Physiochemical Methods** are of recent origin, but have risen to a place of much importance clinically. They consist in the use of organic matter in an unchanged or in an altered form or in the employment of derivatives of organic matter (serotherapy, organotherapy, animal extracts, antitoxins, opsonins, etc.).

The four groups mentioned and their subdivisions represent the entire field of physiotherapy. In keeping with the clas-

sification given we will, in our subsequent discussions, consider the relation of each individual physiotherapeutic agent to the clinical problems that confront us in the treatment of disease. In doing so we shall be ever mindful of the spirit of modern medicine which always seeks to adapt the best means to the purpose to be accomplished. To use every available therapeutic agent legitimately at the right time, in the proper place and in the right manner, this after all should be the end and purpose of all therapeutic knowledge.

### EXAMINATION QUESTIONS

1. What is a remedy? How may remedies be defined?
2. What is pharmacology? What is the common understanding of the meaning of this term, and what term correctly covers the latter?
3. Define *materia medica*, *pharmacognosy*, *therapeutics*, *pharmacy*.
4. What is the weight of a gallon of water? Of a minim? At what temperature is this determined?
5. What is the difference between a troy ounce and avoirdupois ounce? What system of weights and measures is now official in the U. S. Pharmacopoeia.
6. Is one minim equal to one drop? Is there an equal number of drops to the dram of water, tinctures, oils, spirits, glycerin, mineral acids?
7. Name the advantages of the metric system. Its disadvantages.
8. What is the advantage of the metric unit, and how is it determined? How are the liter and the gram derived from the unit?
9. Write a prescription for a 3-ounce mixture (troy) containing appropriate amounts of strychnine nitrate, Fowler's solution, and a suitable vehicle. Also write the same prescription for a 100 Cc. mixture, metric system.
10. Give a metric formula for a laxative pill containing three or more ingredients. Give reasons for the proportions adopted.
11. Write a prescription for a 4-ounce mixture to contain 5 grains of chloral and 1-8 grain of morphine to each teaspoonful. Also a prescription for an 8-ounce mixture containing 8 grains of potassium bromide, 10 minims of tincture of digitalis, and 15 minims of tincture of gentian to each tablespoonful dose.
12. At what temperature, both centigrade and Fahrenheit, has water its greatest volume? At what temperature its smallest volume?
13. What is the difference between the class of chemicals known as amides and amines?
14. Which class of alkaloids contains oxygen, and which do not? Give a number of examples with their chemical formulas.
15. Enumerate some of the disadvantages and dangers of liquid prescriptions containing alkaloids, including those as to dosage and incompatibilities. Give an example of each.

16. Give two examples each of incompatibilities—chemical, pharmaceutical, physiological.

17. Write out carefully what objections there may be to any of the following prescriptions, in a chemical, pharmaceutical or pharmacodynamic sense:

- (a) Quinine sulphate.....grs. 30  
Potassium iodide.....drs. 2  
Syrup of sarsaparilla.....ozs. 8
- (b) Sodium bicarbonate.....grs. 80  
Dilute nitrohydrochloric acid.....drs. 2  
Compound tincture of gentian...oz. 1  
Syrup of ginger.....ozs. 2  
Peppermint water, enough to make...ozs. 8
- (c) Strychnine sulphate.....gr. 1  
Compound tincture of cinchona...ozs. 2  
Syrup of orange peel.....ozs. 2  
Sodium bicarbonate.....dr. 1  
Water, enough to make.....ozs. 8
- (d) Morphine sulphate.....grs. 4  
Potassium bromide.....drs. 2  
Syrup of wild cherry.....ozs. 4

18. Epitomize the advantages of the active principles.

19. Give a classification of the different active principles.

20. Give advantages and disadvantages of standardization.

21. Differentiate between physiologic and physical methods and classify the forms of the latter.

### RESEARCH QUESTIONS

1. Look up the glucosides and resins and tell about their chemical and pharmaceutical incompatibilities.

2. Submit two prescriptions, if possible from your own experience, each illustrating chemical and pharmaceutical incompatibility. Give the reasons.

3. Define the term spagyric.

4. Tell something about Galen and of his influence in medicine. (Limit 25 or 30 words.)

5. When and where was the very first pharmacopeia adopted? How often is the U. S. P. revised and by whom? How is the revising body formed? When was the first edition issued?

6. Name ten preparations of the National Formulary which you consider imitations of proprietary remedies, giving the latter's names.

7. Name a basic alkaloid which is comparatively soluble in water.

8. Which of the alkaloids were the first to be isolated, and by whom?

9. What is the meaning of ester? Give an older synonym.

10. Define and tell about isomerism in alkaloids, giving examples.

11. What are the animal alkaloids? Name several.

12. Tell something (25 to 50 words) about toxins, antitoxins and opsonins. What are the three glands whose secretions are of most interest in immunity, according to Sajous' theory? (See back numbers of CLINICAL MEDICINE.)

13. Measure carefully your tea-, dessert- and tablespoons of the different sizes available, and report the exact results.

14. Which graduates for small quantities are the more accurate, the cylindrical or tapering?

15. Drop into a small graduate 100 drops each of the various classes of liquid galenicals, repeating the experiment with different kinds of vials. Report the measure noted in each instance, and note the differences in the lips and stoppers.

16. Differentiate carefully between galvanic, faradic and static electricity.

17. What is the physiologic effect of external applications of cold?

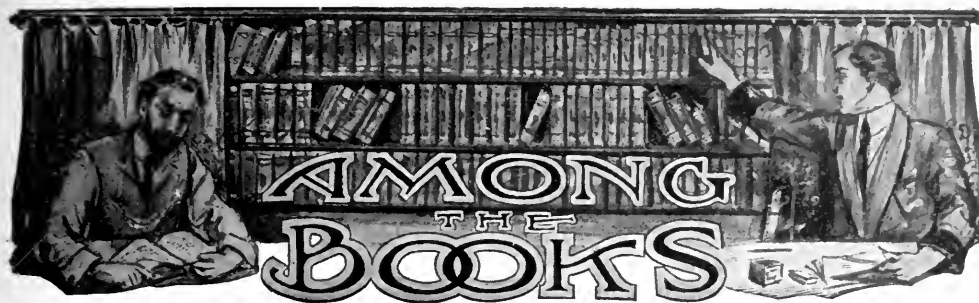
Go through these questions carefully and at your leisure, sending in your answers, however, as soon as you can, since the interval between the two issues is very short, and we want your material, the best of it, available for our next number. Ask questions—lots of them. We don't want to leave a single obscure point or to leave untouched anything that may be of assistance to any one. In answering these questions do not confine yourself to the lesson-text, or even to the suggested books of reference. Go to anything and everything that you may have, and especially draw upon your own experience.

Now, fellow students, it's up to you!

### BOOST A BIT

Here! you discontented knocker,  
Growlin' 'bout the country's ills;  
Chloroform yer dismal talker;  
Take a course o' liver pills.  
Stop yer durn ki-o-tee howlin',  
Chaw some sand an' git some grit;  
Don't sit in the dumps a-growlin',  
Jump the roost  
An' boost  
A bit!

Fall in while the band's a playin',  
Ketch the step an' march along—  
'Stead o' pessimistic brayin',  
Jine the halleluyah song!  
Drop yer hammer—do some rootin'—  
Grab a horn, you cuss, and split  
Every echo with yet tootin'—  
Jump the roost  
An' boost  
A bit!



## INTERNATIONAL CLINICS

A quarterly of illustrated lectures and especially prepared original articles by leading members of the medical profession throughout the world. Edited by Dr. W. T. Longcope. Vol. II, 1907. Publishers, J. B. Lippincott Company. Price \$2.00.

The volume contains many exceedingly valuable articles on treatment, medicine, surgery, gynecology, pediatrics, neurology and Pathology, all well illustrated.

While there is not an indifferent or mediocre article among the twenty-five, two of them fastened our attention, to wit: "Management of Exhaustion States in Men," by Dr. L. Madison Taylor, and "Insanity in the Aged," by Dr. Charles W. Burr.

Neurology has far advanced in our day, anatomically and physiologically, and therefore therapeutically as well. The modern physician can localize the nervous diseases of his patients in his own mind and treat them the better for it. There is so much good sense in these two articles, evidently the result of personal trained power of observation, that those whose practice is not so extensive in mental diseases can profit from them opportunely.

Vol. III of the same International Clinics, 1907, contains instructive articles in addition to the departments of Vol. II, also articles on genitourinary diseases, in which department there is a very important and practical article upon a new subject, to-wit: "Spermatic Insufficiency and Diastematic Insufficiency," by Ancel and Bouin, assistant professors in the medical faculties of Lyons and Nancy France. "We know," say they, "that the testicle is composed of

two separate and distinct glands that intertwine with each other; the seminal and the interstitial gland or diastematic gland (from diadryua—must be 'diadreenai' to run through—on account of its situation between the seminiferous tubes). The one of these two is contained in the seminal tubes, the second is situated in their interstices," etc. The subject is evidently of important bearing on male impotence.

Another valuable (among many) valuable articles is the one on "How to Turn Back the Upper Eyelid," by Dr. Raymond Beal. It is a useful accomplishment not only for the ophthalmic specialist but perhaps more so for the general practitioner.

## NOTHNAGEL'S "DISEASES OF THE INTESTINES AND PERITONEUM"

Nothnagel's Practice, Diseases of the Intestines and Peritoneum. By Dr. Herman Nothnagel, late Professor of Special Pathology and Therapy, University of Vienna. Edited with additions by H. D. Rolleston, M. A., F. R. C. P., London, second edition, thoroughly revised. Authorized translation from the German under the editorial supervision of Alfred Stengel, M. D., of the University of Pennsylvania. Philadelphia and London, W. B. Saunders Company. 1907. \$5.00.

In our review of the first edition of this work, in the CLINIC of 1904, we called it an invaluable thesaurus on the diseases of the intestines and the peritoneum. This second edition is augmented by 29 pages, and some alterations in the substance of the book were made for the better. Otherwise the book is both a monument to the rare

scholarship of the author and a useful manual on the intestinal and peritoneal diseases.

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**SANTEE'S "ANATOMY OF THE BRAIN"**

Anatomy of the Brain and Spinal Cord, with Special Reference to Mechanism and Function, for Students and Practitioners. By H. E. Santee, M. D., Ph. D., of the Medical Department of the University of Illinois. Fourth edition, revised and enlarged, profusely illustrated. Philadelphia, P. Blakiston's Son & Company, 1907. \$4.00.

A magnificent book containing the latest theories about the anatomy and physiology of the cerebrospinal system, besides the minutiae of its parts.

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**BRUCE'S "STUDIES IN BLACK AND WHITE"**

Here is a story of the "Old South," written by our friend, Dr. Jerome Bruce of Sanford, Florida. The author paints an idyllic picture of life on the great plantations, before the war, a picture which is not only fascinating, but which is apparently true to life as he himself has seen it. Is there a touch of autobiography in it all? Certainly the story of the DeMars, of the chivalric sons and beautiful daughters of this noble Southern Huguenot stock, and of their friends and retainers, black and white, gives us an entrancing view of the patriarchal life of a period which has now passed away forever, and a new conception of the relation between master and slave. Reading this book, we can understand how our southern friends look back upon and glorify the old days, even though they would not try to bring them back.

We shall not try to tell the story of Doctor "Jack" DeMar, the hero of this story, nor follow him through his early manhood, his life comedies and tragedies, through war and peace and reconstruction. We shall leave that pleasant task to the reader, who we feel sure will enjoy it as much as we have. The book is of wonderful in-

terest, and of remarkable literary style. The Neale Publishing Company, New York. Price \$1.50.

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**KELLY'S "GYNECOLOGY AND ABDOMINAL SURGERY"**

Gynecology and Abdominal Surgery. Edited by Howard A. Kelly, M. D., F. R. C. S. (Hon. Edin.) of Johns Hopkins University, Baltimore, and Charles P. Noble, M. D., of the Woman's Medical College, Philadelphia. Fully illustrated. Vol. I. Philadelphia and London. W. B. Saunders Company. 1907. \$8.00.

In the present irrepressible tendency to differentiate specialism in medical work, there is thought to be danger that the gynecologist may not sufficiently engross his mind with other parts of the body beside what belongs exclusively to gynecology, and the general surgeon may also not sufficiently familiarize himself with gynecological work. To obviate this danger is the object of the volume now before us and of one or two more to come. At the same time the strictly medical part of gynecology is also treated quite fully so that the specialist may be furnished perfectly for every good work in his line. The equipment and illustrations of this volume deserve special laudation.

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**REGISTER'S "FEVER NURSING"**

Practical Fever Nursing. By Edward C. Register, M. D., Professor of the Practice of Medicine in the North Carolina Medical College. Illustrated. Philadelphia and London. W. B. Saunders Company, 1907. \$2.50.

It used to be said, and might still well be said, that a fever patient who had the choice of having either a physician or a nurse to attend him would stand a better chance of recovery if he took the nurse. But "*Tempora mutantur et nos mutamur in illis*," and the nurse must now know more than of old in order to be an efficient help to the attending physician or be efficiently self-initiative in an emergency during his ab-

sence. For this purpose Prof. Register's more than usually extensive book will be found to be the efficient manual. Efficiency is to be attained by specialism after obtaining a general knowledge, and modern nursing has to follow the same road, and this book is an excellent guide.

#### KERLEY'S "DISEASES OF CHILDREN"

Treatment of the Diseases of Children. By Charles Gilmore Kerley, M. D., of the New York Polyclinic Medical School. Fully illustrated. Philadelphia. W. B. Saunders Company, 1907. \$6.50.

Complaint has been made, not wholly from a proclivity to fault finding, that many medical manuals and textbooks are largely compilations, of copied matter, classic, to be sure, but little that was not known before by those who keep up with medical literature. To forestall this censure the author of the book before us assures us that "the means and suggestions herein are not drawn from the literature but from experience based upon a somewhat extensive application of the principles evolved by the author in private and hospital practice."

This is the best reason a book can have for its existence. The book contains 554 pages of text, 17 pages of a list of drugs and dosage for internal and external medicines for children of six to eighteen months and three to five years old, and an index of 34 pages. This is an excellent arrangement for such a really practical book.

#### WHARTON'S "THE FRUIT OF THE TREE"

The problem around which the plot in this story revolves is one which has been much discussed by physicians—that of euthanasia: has the physician the right to take the life of a patient suffering from an incurable disease to shorten the period of otherwise inevitable pain? Mrs. Wharton has dealt with this problem in a truly wonderful way.

John Amherst, the manager of the mills at "Westmore," is a man of good family,

excellent education and high ideals. He rebels at the injustice done the employes of the mills by the too grasping owners; he longs to work out certain economic reforms to better conditions; but he meets with neither encouragement nor sympathy from those in charge. Finally he meets the owner herself, a young widow who has just come into possession of this property; they are attracted to each other, and he marries her. Unfortunately she does not sympathise with his ideals and he fails to understand the pleasure-loving spirit of his wife. Both become more and more unhappy, and as a culmination of misunderstandings they separate and the man goes abroad.

There has come into the lives of these two a young trained nurse, Justine Brent, an old friend of Mrs. Amherst, and an acquaintance of her husband, with whose work she sympathizes deeply. Immediately after Amherst has finally left her, Mrs. Amherst receives a fall from her horse, causing an injury to her spine. It soon appears that the possibility for recovery is very remote; one physician only, a young man, Wyant, holds out hope. He sees in this case the chance he has sought to achieve a reputation, and in a truly wonderful way he battles for Bessie Amherst's life. Justine is convinced that it is all in vain; she sees the life of her charge slowly slipping away, but far too slowly, since every effort to prolong it serves only to prolong and intensify the awful agony of the sufferer. She becomes obsessed by the idea that it is her duty to relieve Bessie from her suffering. She seeks light from the great attending surgeon, then from a clergyman, goes over each argument again and again, but finally yields to the constant wails of the sufferer and gives the pain-relieving overdose of morphine.

Amherst finally returns, and after a time he and Justine marry and are happy. Now the serpent enters their Eden in the person of Wyant, now a ruined, disheartened man, a victim of the morphine habit. He has discovered Justine's secret and uses it to blackmail her. An interesting situation is

created, giving ample opportunity for the display of the novelist's remarkable powers of character analysis, and rounding out a strong story—the denouement of which we shall not try to tell.

From a literary standpoint this book is a masterpiece. The plot is well mapped out and the story admirably told. The strength of character deliniation, of analysis of motives, has something which is distinctly masculine in character. There is little of the softness, the tenderness of the woman even in the love-making passages. Justine justifies herself for taking the life of her friend, and is convinced that she did right: euthanasia apparently has the author's approval—and to this extent the book must be condemned, as bearing the stamp of casuistry. But it is interesting, intensely interesting, and every physician will enjoy reading it.

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#### SWEENEY'S "ANIMAL THERAPY AND IMMUNITY"

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Animal Therapy and Immunity in the Treatment of Tuberculosis. By Dr. Gilliford B. Sweeney, Pittsburg, Pa.

This is a pamphlet of 36 pages, giving a very serviceable resumé of the subject, which we would urge upon every reader who has a tubercular patient under treatment to read through. The price is not stated, but no doubt it can be had from the author gratis, to whom thanks are due for it.

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#### HORTON'S SYSTEM OF MEDICAL BOOKKEEPING

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To the average physician the accurate keeping of his accounts, with the minimum of labor and the maximum of convenience, is of the utmost importance. There are many "visiting lists" and bookkeeping "systems" on the market, many of them excellent, but few equal that devised by Dr. Alexander F. Horton, 944 March Ave., Brooklyn, N. Y. His "perpetual pocket record sheet" has the advantages of being light, thin, carried with or without a wallet,

easily consulted without turning leaves, always clean, abundance of room, posted as often as filled and then filed. The price for thirty patients a week is \$1.00. Larger ones at proportionately higher prices. A fine leather wallet, with pocket, 50 cents extra.

Naturally accompanying this is the "physicians' perpetual single entry day-book and ledger," which seems to be a model of convenience. It provided for 1,400 accounts and 1,600 entries. The price is \$6.

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#### VAN HARLINGEN'S "DISEASES OF THE SKIN"

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Diseases of the Skin. By Arthur Van Harlingen, Ph. B. (Yale), M. D., Emeritus Professor of Dermatology in the Philadelphia Polyclinic. Fourth edition, revised and rearranged, with 102 illustrations. P. Blakiston's Sons & Co., Philadelphia, 1907. Price \$3.00.

This book gives us in a condensed and thoroughly practical form the latest development of dermatological knowledge. The dermatoses are treated under the following classes: Hyperemia; inflammations; hemorrhages; hypertrophies; atrophies; new growths; neuroses; diseases of the appendages, such as the nails, hair, sebaceous and sweat-glands; and parasitic, vegetable and animal affections. We think that the physician will find more real help in this volume than in many of those of higher price which enter more extensively into the subject. Quite properly, from the standpoint of the general practitioner, the theoretical is subordinated to the practical. Details concerning treatment are quite full.

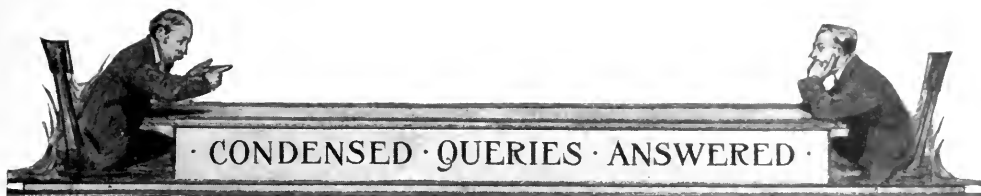
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#### DREW'S "INVERTEBRATE ZOOLOGY"

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A Laboratory Manual, prepared by Prof. G. A. Drew and associates in the Marine Biological Station at Wood's Holl, Mass. The amount of information here given is far beyond what we meet in general zoologies. Published by W. B. Saunders Company, Philadelphia and London, 1907. \$1.25.





#### PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## QUERIES

QUERY 5244:—"Facial Stain Following Erysipelas." A. R. P., Illinois, says: "In treating a case of facial erysipelas I followed my usual custom of surrounding the affected area with a coat of pure carbolic acid neutralized with alcohol. Then I used carbenzol instead of 25-percent ichthyol, as I had been used to doing. There is now a dark stain outside of the area which was affected by erysipelas. It has been there now four weeks and gets no better. I have a very indignant female on my hands. What can I do to get rid of that stain?"

We note with interest the peculiar conditions reported. As you are aware we have recommended the application of carbolic acid in erysipelas for a long time and invariably instruct that the phenol shall be neutralized by the application of alcohol within one minute. Carbenzol has been used in these cases for the last year or two and never before have we heard of a stain following the treatment. Some peculiar combination of circumstances must have prevailed in this particular instance. Does the stain correspond to the edge of dressing applied and how deep is the discoloration? No substance will produce a change of pigment color from local application only, owing to the depth of the pigment cells. It is possible that you did not completely neutralize the carbolic acid, which was probably applied not only *on* the erysipelatous area but *about* it. Carbenzol was then applied to the affected part only. This prevented the full action of the carbolic

acid on the affected area. The outer portion did not receive carbenzol and the action of air upon the carbolic acid outside the dressing caused discoloration. You have, then, a carbolic acid stain which should disappear in another week or two. Let us know how things turn out.

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QUERY 5245—"Frontal Headache." H. H. F., South Dakota, asks for advice in the case of a young married woman, healthy, good weight (but not too fat) who has occasional attacks of very severe headache. Head feels very full, ears seem as though they would burst; the face is flushed sometimes and other times pale. Atropine, nitroglycerin and the various acetanilid preparations and combinations do not help. The bowels are all right, also the urine. The tongue is not coated.

We wish we were able to name offhand the "best remedy" for a severe frontal headache in a full-blooded young woman. You do not say when the attacks occur. You do not give us the slightest idea as to pelvic or ocular conditions. The headache may be due solely to retroversion or some other malposition of the uterus. It may be an ocular-reflex headache. In order to give the right remedy for the condition present it is absolutely essential that we understand the physical conditions existing. Headaches, as you know, are sometimes the most puzzling maladies to treat. The acetanilid preparations should be the last things to think of. Make a careful and full physical examination, noting especially the character

of pulse, reflexes, condition of nose, throat and ear. Then pay attention to the pelvis. Has this woman had any children? Is she hysterical? How about digestion? In this connection let us urge you to make a special investigation as to the size of this lady's corsets. This is not a joke by any means. We have found a good many of these so-called congestive headaches due entirely to tight lacing, which proves, as you know, more injurious at certain times.

In congestive headaches a few doses of gelsemin alternated with minute doses of veratrine often prove remedial. Dissolve two granules of veratrine in six teaspoonfuls of water and have her take a teaspoonful every fifteen minutes, substituting one granule of gelsemin for each third dose. Invariably institute "clean up" procedures, giving calomel and iridin one granule. euonymin, gr. 1-6, half-hourly for six doses, and two hours after the last dose give a saline laxative—preferably in *hot* water. If these measures do not prove efficacious try atropine valerianate, one granule, repeating the dose in an hour, or the cannabin and atropine compound. If you feel disposed to make a very careful examination of the patient and report your findings we shall be pleased to suggest more definitely.

QUERY 5246.—"Wanted: A Remedy for 'Squeaky Joints.'" J. C. D., Wisconsin, asks: "Is there any medicine you can recommend for a dry, squeaky condition of the joints in a man forty-six years old, with no specific disease, no rheumatism, no kidney trouble, who seems to be healthy in every way except this dry condition of the joints? No indication of arthritis deformans."

We are absolutely unable to prescribe intelligently for the symptom you describe without having a more thorough understanding of physical condition. What is the prior history? What nutritional condition prevails? Is the man very spare, and has he been exposed constantly to atmospheric changes? Is there any lack of motility? How are the reflexes? Any muscular wasting? Go over the man care-

fully, Doctor, report results and send a brief clinical picture with a specimen of urine. In the meantime we suggest that you institute passive motion and order inunctions of lanolin, coco-nut oil and vaseline, equal parts. You cannot do more than this until you are familiar with the abnormal conditions which may cause the "squeaking" described.

QUERY 5247.—"Extensive Lesion Involving Anus, Perineum and Penis of Infant," L. W. M., Tennessee, has a patient, a little male child less than one year old. About six months ago the mother died (when it was about two months old) and it was raised on the bottle alone. About six months ago the "little cord, or seam, extending from the anus to the scrotal sac" seemed to enlarge and became red and inflamed, after which there appeared a sore on the side of the anus which has persisted ever since. When treated with antiseptics, it would become hard and crack open, then spread larger, and this continued up the entire cord to the penis, and now the penis is all bent out of shape and appears also to be inflamed and bent on itself. The doctor believes it to be eczema. The sore now seems to be spreading to both sides of the anus, and when the bowels move pus appears to discharge along with the feces. There is also a sore on the right hip, which has remained ever since. The child passes water all right, but walks only with great pain.

This is a serious case and it is impossible from the limited facts at our disposal to form an idea as to the character of infection or extent of tissues involved. It is quite evident that slowly and steadily the disorder is spreading and you will probably find an abscess exists which is emptying through a sinus into the rectum. What is the history? Any tubercular or syphilitic taint? We fear one of the two. This child should be given small doses of echinacea (gr. 1-3) and calcium sulphide (gr. 1-6) four times daily, and one triple arsenate tablet twice daily after meals. Cleanse the parts affected thoroughly with pure hydrogen peroxide

(wash out the lower bowel *first* with the same agent, 1 part, to glycerin, 1 part, and water, 6 parts), then, with plain warm water. Now insert into the bowel about half a teaspoonful of an ointment of vaseline, benzoated lard and carbenzol, equal parts. Apply carbenzol to the other affected areas, or the same ointment first, gradually reducing its other ingredients until only pure carbenzol remains. Explore carefully for an abscess which probably will be discovered. If there is a suspicion of lues, place the child on the antisyphilitic formula and calx iodata.

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 QUERY 5248.—“Cicutine.—Copper Arsenite.” J. E. H., Kansas, asks: “Is there danger from the continued use of cicutine, and in what dosage can it safely be employed? I have a few cases of obstinate nervous dyspepsia in which I am using cicutine, gr. 1-134. My literature is limited on this drug and I should be pleased if you can set me right. How long and to what extent can I push copper arsenite? How do you treat stomach disorders in nervous women?”

Cicutine is preeminently an emergency remedy and can rarely be used continuously for a long time with safety.

Copper arsenite administered in minute doses may be used every three or four hours for several days, but we certainly would not suggest its use *continuously*.

As for stomach disorders of nervous women, treat conditions present, not a complex clinical picture, using, wherever it is possible, the single remedy to counteract a single pathological condition. Most nervous women need elimination, improved nutrition and restoration of circulatory and nerve equilibrium. The uterine sedative and nerveine is an excellent formula in many cases; nerveine (Waugh) meets the conditions in other patients; scutellarin, cypripedin, zinc phosphide and the digestive formulæ will apply elsewhere, and in *every* case eliminants are indicated. We should push cicutine (gr. 1-134) where indicated until relief or the physiological action of drug became evident. We cannot, how-

ever, conceive conditions calling for the constant exhibition of the drug. The positive therapist will take pains to remove the conditions setting up the nerve irritability demanding the exhibition of cicutine.

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 QUERY 5249.—“Maceration of Skin on Living Fetus.” A. W. B. of Oregon reports a most interesting case, as follows, and asks an explanation: “The case which I am reporting is, to me, so peculiar that I detail it to the ‘family,’ hoping to elicit some light on the obscurity around me. In seventeen years of practice I have not seen a parallel case. On October 9, 1907, I was called to attend a strong, robust woman in her seventh confinement. I found her well advanced in labor, the presentation L. O. A., but no sign of a bag of waters, and she asserted that no water had been discharged. At 6 a. m., two hours after I arrived, she was delivered of a sturdy ten-pound boy, lusty and boisterous. The cord was wound quite tightly about the neck but was released without difficulty. There was almost total absence of vernix, notwithstanding the fact that there was scarcely a trace of liquor amnii. The child was turned over to the nurse, who presently called my attention to the peculiar appearance of the skin on its hands, and upon investigation I found that the integument was exfoliating, both on hands and feet, as though it might have been subject to a scalding process. It had the general appearance of the shedding skin from a macerated fetus that had been dead for some days. The mother had had a threatened miscarriage at the seventh month. Had quite severe pain for two days, since which time she had not felt very well but had been able to attend to her household duties. Now what I would like to know is, What caused this condition of the child?”

As you are aware, Doctor, the various diseases of the fetus and the changes which take place during intrauterine life are far from being thoroughly understood. The normal process of development we know to a certain extent, but if anything abnormal

does occur we are unable to offer an explanation. It is very rare indeed for exfoliation to occur in a living child, and in this particular instance we are compelled to regard the accident which occurred at the seventh month as the *causa causans*. Our knowledge of embryology enables us to state that the most active stage in the formation of the outer layer, or epidermis, is between the sixth and eighth month, vernix caseosa being first recognizable at the end of the sixth, covering the entire surface of the body in the eighth. This, as you know, serves to protect the epidermis of the fetus from maceration in the amniotic fluid. Now, when we recall the threatened miscarriage at the seventh month, we can readily understand that some derangement occurred preventing the formation of vernix caseosa. The amniotic fluid increases in quantity until the sixth or seventh month, when it begins to diminish. As you know, it supplies the fetal tissues with water and portions of it are swallowed. We shall have to consider, then, that abnormal conditions prevailed from the seventh month, causing, first, disappearance of vernix caseosa and, secondly, absorption of liquor amnii; hence the dry birth, the absence of vernix caseosa and exfoliation of partly macerated skin. No other explanation occurs to us and we sincerely hope that readers of THE CLINIC will study the matter and present any ideas which may occur to them. The mere fact that a ten-pound child was produced in this case is not extraordinary, for, as we know, the weight of the child increases as pregnancies multiply, and the seventh child of a robust woman—especially if a boy—would be more likely to weigh ten pounds than seven. The winding of the cord about the neck would be explained by the absence of amniotic fluid. Of course some fluid probably remained in the uterus and was voided unknown to the mother in the earlier stage of delivery.

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 QUERY 5250: — "Epilepsy Caused by Phimosis in Aged Man?" H. M. B. of South Dakota reports case of epilepsy in an old man of eighty-eight, who is quite

robust, but has had what they call epileptic fits for just fourteen years. While in one of these attacks he had a fall and hurt his thigh and has been in bed most of the time. While assisting in "drawing his water" the doctor discovered that his foreskin was completely filled and bulging with foul-smelling urinary deposits. It was evident he had never drawn the foreskin back or cleaned the parts for years. The doctor reasons that being a very strong man with well-preserved powers he probably kept the parts clean up to fourteen years ago by regular intercourse, and after ceasing to do so, the excreta began to collect and the absorption of decomposition-products are causing the fits. The man does not always fall when seized; sometimes, by holding on to him he can be kept on his feet until he "comes out of" the fit, and he can keep on walking as if well. The attacks last, when he falls, about ten or fifteen minutes. He does not foam at the mouth nor are the convulsions as severe as in some cases of genuine incurable grand mal he has encountered. He keeps his feet, if he is sitting down, going up and down in a churning motion. His eyes have a wild look but do not bulge. He clenches anything with a very strong grip with his hands and is entirely unconscious of what is happening; does not remember anything afterwards about it. He has no "aura" and does not know that he had a fit. The doctor is of the opinion that this patient ought to be circumcised at once and then put on our treatment for epilepsy, and closes by saying: "I understand that you have a new anesthetic containing morphine, hyoscine and cactin, which is splendid for minor operations. Will it be all right to use it on this case for circumcision, or would cocaine be better?"

The doctor probably has struck the nail on the head; reflex irritation and general toxemia, from absorption by the glands of poisons generated unquestionably might cause these seizures. Circumcision is such a very short operation that it hardly seems necessary to use general anesthesia, but one might, in such an old patient as this,

give one H-M-C tablet, repeating the dose two hours later with a full-strength or half-strength tablet, gauging the dose by the condition of the patient, and then inject a cocaine solution (never adding brucine or strychnine) and perform the operation. A one-percent injection of cocaine or one of two-percent of stovain will, if injected thoroughly between the layers of the foreskin, produce perfect anesthesia. A rubber band should be drawn around the base of the organ to prevent absorption. Do a good, low circumcision in this case. Then place the patient upon the epilepsy treatment outlined by Dr. Candler, using small doses and watch results. We should not be surprised if the patient never had another seizure.

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QUERY 5251.—“Anuria Following the Use of H-M-C.” A. S. T. of Ontario writes: “On September 18, 1907, R. F., millman, aged 40, was caught in a belt and carried around a shaft; when released, his right arm was found to be severely injured. Was seen about two hours after accident and given one full-strength tablet of H-M-C. A second dose was given in fifteen minutes. Patient went to sleep sitting in a chair. Two fractures of the right humerus and one of the right radius near wrist were found: all simple, and one of the middle of the right ulnar with protrusion of the bone. The bones were placed in position and secured with splints. The patient slept from 4:30 p. m. to 11 p. m. Had no recollection of the limb being set. Between 11 p. m. and noon of next day he took, by mouth, three more of the full-strength tablets. The only unpleasant symptom was anuria of thirty hours’ duration. Renal functions returned without anything being done.

“September 19, D.A., farmer, was struck on the left buttock with a heavy log, and the sciatic nerve was severely injured. Pain was most severe. I injected one full-strength hyoscine-morphine-cactin tablet, and a second in one hour, before pain was sufficiently controlled to permit of examination. There resulted anuria of twenty-hours’ duration

but with natural recovery. In both of the above cases the amount of urine excreted after thirty and twenty hours, respectively, was no greater in amount than what might be expected to be voided after an eight- or nine-hours’ interval since previous urination, and apparently no ill effects whatever were experienced in either case. More mature consideration seems to warrant one waiting until some subjective symptoms are complained of by the patient before attempting catheterization. What do you think?”

We quite agree that catheterization is uncalled for where suspension of renal function, temporarily follows the use of hyoscine-morphine-cactin. As the doctor says, the amount of urine passed after thirty hours’ anuria is not greater than under ordinary circumstances, would be voided after eight hours. The catheter should never be used if it is possible to avoid doing so—and where the renal function is in abeyance temporarily the bladder may safely be left uninvaded.

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QUERY 5252.—“A Case of Inoperable Cancer.” C. B. H., Mississippi, has a patient who is suffering from a cancerous growth of the axilla. She has had the glands as well as the breast removed and now the parts are ulcerating, and nothing can be done but relieve pain. H-M-C (half a tablet) relieves at once. “I wish you would advise me how often and how long may she take them. Morphine nauseates her for several days and so does any other form of opium. Hyoscine-morphine-cactin does not, and it has a beautiful effect. Can I give one or two half tablets a day for months with no danger from hyoscine? It is the only thing I have found that relieves her, and hyoscine-morphine-cactin is generally ahead of anything I have tried.”

In a case of this kind the doctor will have to give hyoscine-morphine-cactin as required. “Habit” here does not matter. Keep the bowels thoroughly open with calomel, podophyllin and bilein given at night and saline laxatives every morning. Give just enough H-M-C at three- and four-hour intervals to

maintain a drowsy euthanasia. One can certainly give two tablets—or more—a day for months, supposing this unfortunate woman should live that long. By the way, a trial of carbenzol as a local application is suggested. In other cases this preparation has absolutely controlled the stench, limited discharge, and to a very great extent stopped pain. A little orthoform may be added or dusted on the parts first with advantage.

QUERY 5253.—“A Really Remarkable Theory.” C. J. B. of Pennsylvania, in a recent communication says: “October 8 was an anniversary for me, marking a year of very successful use of the alkaloids. That the alkaloids have served me well indeed goes without saying, for though I have had all kinds of diseases to treat in that time, yet I have not had one single death, and while I had some narrow escapes, the alkaloids never failed to do the work. Now I am more than ever a firm believer in the active principles and also in the ‘clean-out, clean-up and keep-clean practice.’ I should like to ask any of the ‘family’ if this rule could have been more forcibly or beautifully applied than in the case cited below.

“Adult female, suffering from a typical case of scarlet-fever, also from a marked constipation, at the height of the fever: in fact, there had been no bowel movement for several days. As a result there was very frequent vomiting, in fact everything taken would in a very short time be rejected. The mother now asked the attending physician if it would not be well to give the patient a physic. He replied: ‘O my, no! If I were to do that and it should pass down it would poison the whole system.’ Now, can any one see the minutest speck of ‘scientific medicine’ in this? If so, I should be glad to hear where? Is it any wonder we have so many cemetery shafts that shine out to the credit of such ‘scientific’ men? Would it not have been a million times better if this physician had possessed just a little ‘horse sense,’ and gotten rid of the poisonous mass that each day was more and more poisoning the already overwhelmed body? How it was to poison

the body as it was ‘passed out’ after a ‘physic’ was given, goes beyond my reasoning powers! If the patient recovers in such a case it certainly is not the result of appropriate (or I might say common-sense) treatment, but is due solely to the inherent resistance of the body. What do you think about it?”

Let us congratulate you heartily upon your success, Doctor! May each year see you high up the ladder, one step closer to the pinnacle of success. The man who uses the active principles intelligently, treating pathological conditions present with the indicated remedy in small repeated doses, *must* succeed. Still, it is not every man who is able to go through a year’s active practice without a single death. The results show that you have diagnosed closely and given the right remedy at the right time in the right way. The absurd remark of the attending physician in the case of scarlet-fever deserves to be perpetuated. That a modern practitioner should show such woful ignorance almost passes belief, and proves (what we have so often claimed) that it is still necessary to teach and *reteach* first principles.

QUERY 5254.—“Incontinence of Urine.” E. S. W., Michigan, writes: “I should like your valuable assistance in a case of incontinence of urine in a young lady 24 years of age, who has been troubled since birth. She is a stenographer, 5 feet 8 inches in height, weighs 147 pounds, has light hair, face pale, is very nervous, must be on the move constantly; pupils are dilated, good appetite, face flushes at times, bowels act once or twice a day. Menstrual period regular, lasting about seven days, quite profuse the second and third days, some pain during the first day. The uterus seems to be in a normal position but is somewhat sensitive; no leucorrhea. The sensitiveness I attributed to nervousness. The meatus urinarius is a little red and open, very sensitive. The clitoris adherent, hood very long, small fissure in the rectum, otherwise normal. Urine light-colored, specific gravity 1020, slightly acid;

there is no burning when urinating, but the desire to urinate varies from ten minutes to one hour; if near a closet, it is necessary to evacuate the bladder every ten minutes; or if she gets nervous or even thinks about urinating she will have to respond to that desire at once or the urine will involuntarily escape, and it does so several times a day. She always has to change the clothing at noon and at night. The amount of urine passed in twenty-four hours is three pints. She drinks quite often. As soon as she retires she is able to retain the urine without any discomfort until morning; and even in the daytime, if she lies down, she can retain the urine for hours; but the moment she is on her feet she must void the urine, and sometimes in the morning it will escape before she can reach the bath room, only a few feet distant. There is a great deal of pain in the back about the third sacral.

"On February 2 last I administered the H-M-C compound, and with about one dram of chloroform liberated the clitoris and amputated the hood; also gave the fissure proper attention; confined her to the bed one week. I gave arbutin, gr. 1, every two hours, with strychnine, gr. 1-50; also enough benzoate of lithium, gr. 1-6, to keep the urine neutral. All went well as long as she remained in bed. The fissure healed nicely. As soon as I permitted her to walk about the trouble returned. Then I used atropine, gr. 1-500 every hour until it produced dryness of the mouth, the pupils being already dilated. After taking the atropine for two days she was able to control the urine for one hour, and within one week could retain it five and six hours at a time. She now is taking gr. 1-250 twice a day. Since taking the atropine she is less nervous, the face is pink, she urinates twice in the forenoon and usually three times in the afternoon. In fact she is much improved in every respect. The question is, will atropine cure this case?"

In this case we fear the doctor will not be able to adhere to his plan of giving one remedy at a time. Innervation has to be

remedied and sphincter tone restored. At the same time there is a hysteroneurotic temperament to deal with. We should dilate the sphincter ani thoroughly and apply to the meatus urinarius on a piece of gauze a good preparation of *calendula officinalis*. *Calenduline*, in our opinion, is one of the best preparations for inflammatory states of the mucosa. If a caruncle exists, remove it. Improve the patient's general tone by exhibiting for two weeks *avenin*, 6 granules, *strychnine* and *phosphorus compound*, one granule every four hours. Half an hour prior to meals exhibit *hydrastin*, gr. 1-6, *collinsonin*, gr. 1-3, *cypripedin*, gr. 1-6. If there is any circulatory inequality add *cactin*, gr. 1-67, to the *avenin* and *strychnine* formula. At night, on retiring, insert into the rectum a large catheter attached to a fountain syringe and have the bowel flushed with barely warm normal saline solution. Allow but little fluid for a few days and provide the patient with a two-ounce vial in which place eight *atropine valerianate* (gr. 1-250) and eight *cantharidin granules*. Water to fill. Order thirty drops every two hours. Assure her she will not want to urinate after twenty-four hours—except three times daily. There *may* be vesical disorder, but we doubt it; if this treatment does not control conditions the bladder will have to be examined with the cystoscope. Use the vibrator and cold salt sponge-baths. Faradism to the spine would also prove helpful.

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QUERY 5255.—"Atropine and Dilated Pupils." F. M. L., Arkansas, inquires why the use of minute doses of atropine with aconitine in cases where the little ones have widely dilated pupils, rolling head and much restlessness controls the symptoms when nothing else will do it. The doctor was advised by a homeopathic physician to use belladonna. He tried atropine and, presto, "she did it." He says he has searched Waugh-Abbott's "Textbook of Alkaloidal Therapeutics" from page 66 (Therapeutics) to page 75, and not once does it say "atropine for dilated pupils." He wishes to learn more about this subject.

We note with interest your report on the effect of *minute* doses of atropine, when the pupil is dilated. There are two ways of looking at this matter. In the first place, the dilation of the pupil (occurring pathologically) is due to the absorption of a certain toxin, whose effect; in this respect, resembles that of atropine. The latter is one of the most powerful agents that we possess in the treatment of constipation when given in *very small* doses, the object being to paralyze inhibition. If given in larger doses it affects the muscular fibers of the intestines, paralyzing them and increasing constipation. Or you may take the homeopathic rule, which is, that exceedingly small doses of this (as of most other medicines) exercises a power directly contrary to that which they show in toxic doses. This is the well-known homeopathic "law" of "similars". While we do not consider it a *law*, it is undoubtedly true in many instances. Still we think the explanation is identical in both cases, and at the best is only conjectural. The main point is whether its action is uniform and may be predicted with certainty or whether it is accidental and uncertain, and to determine this a large number of observations must be made before we can form definite opinions.

QUERY 5256.—"Dosage of Papayotin." F. W. M., Kansas, wants to know whether he can obtain papayotin in granules larger than gr. 1-6. He says: "People kick on five or ten pills three times a day, even if they are small."

One grain of papayotin is considered an ordinary full dose, and in nine cases out of ten, two to three of the 1-6-grain granules prove sufficient. Notice the proportion in the compounds, such as the digestive, papayotin compound, etc. The writer, who uses papayotin in large quantities, rarely gives more than a half grain, and he gets results. To give a grain where a third would suffice is bad therapeutics. Hence the desirability of having the "*minimum* known-to-be-effective dose." It is very easy to give it in multiple, but less so to

give the indicated fraction when one has only the large dose at his disposal.

QUERY 5257.—"To Stop Thumb Sucking." A. T., Mississippi, asks what is the best way of stopping thumb sucking in a two-year-old child. There is nothing better to apply to the thumb than solid extract of aloes. No child will suck his thumb often who encounters this preparation upon it. Another excellent plan is to make a little ring with a small piece of wire which loops over the thumb, or a little tin cap tied on with tape, the tin being perforated like a nutmeg grater, rough edges outside. The child will not suck the rough tin long. However, a few days of bitter aloes and a properly repeated dose of "moral suasion" usually prove effective.

QUERY 5258.—"The Best Hypnotic for the Aged." O. W. H., Illinois, asks what hypnotic will be most satisfactory for constant use in the case of a woman 89 years of age, who, though she suffers no pains, can not sleep at night without taking something? For years she has used a powder which had been prescribed for her for asthma. This is found to be modified Dover's powder with about half the strength of opium. It does not seem to satisfy her any longer. The doctor has in vain tried sulphonal and various other hypnotics, and has finally used the hyoscine, morphine and cactin combination, which does quite well.

Veronal is extremely useful, but probably you will find *passiflora incarnata* in full doses the best preparation in this case. Opiates are not desirable, but in properly selected cases hyoscine in some form, probably as combined above is unquestionably the preparation of choice, and, if you do not allow the patient to increase the quantity taken, and if you maintain elimination, this formula will prove thoroughly satisfactory. For the aged generally, however, *passiflora*, one to two drams in a little hot water, has proven one of the best of our somnifacients.





**HEART TONING.**—The profession must learn to dissociate heart-toning and contraction of the arteries.

**DRUGLESS THERAPY.**—It seems impossible for the lay mind to disassociate the idea of a drugless therapeutics from that of a doctorless patient.

**PNEUMONIA** is most often due to the intestinal absorption, which acts by lowering tone and allowing lung congestion and inflammation.—*Earp—Medical Monitor.*

**CACTUS.**—In protracted fevers, with much heart weakness, cactus will not only strengthen the heart, but will materially reduce the temperature.—*Medical Summary.*

**ETHER** is more dangerous for old people and young children than it is for young adults, but it is not so dangerous for any class as chloroform.—*S. A. Brown, Northwestern Lancet.*

**THE CANTEEN.**—Daniel of the *Texas Medical Journal* says that instead of restoring the canteen we had better abolish the low whisky dives which spring up around army posts. A good idea.

**PREGNANCY.**—In *The American Journal of Obstetrics* for November, R. R. Huggins has a very valuable paper on "The Toxemias of Pregnancy," which we would reproduce if we had the space.

**SCUTELLARIA** (scutellarin) is valuable for nervous patients, especially females passing through the climacteric. It creates appetite, builds up the patient and quiets the nerve centers.—*Jour. Ther. & Diet.*

**GOOD THING.**—You are missing a good deal if you do not get Eccles' letters in *The Medical Fortnightly*. The last one is entitled the "Island of Spicy Breezes," and deals with his recent visit to Ceylon.

**PULSATILLA** (anemonin): Indigestion, with sensation of a foreign body lodged beneath the sternum; also melancholia with fear of impending danger; patients feel better in open air.—*Jour. of Therapeutics and Dietetics.*

**COLIC.**—Minute doses of colocynth (colocynthin) will cure colicky pains in the abdomen and pelvis, which come on suddenly, causing the patient to

bend double, and are relieved by pressure.—*Journal of Therapeutics and Dietetics.*

**ANTIPHLOGISTINE.**—I know a good deal of antiphlogistine by experience in practice and approve of it. Furthermore, I would not prescribe the official imitation when the original and the perfect product is obtainable.—*Medical Consensus.*

**ALKALOMETRY.**—Along this line of progress, *alkalometry* represents the acme of advanced pharmacology; and I believe when once fully understood by both the profession and laity it will come into universal use.—*Schwartz, Cleveland Medical Journal.*

**CONCRETE RESULTS.**—"Papa," asked the eminent surgeon's petted daughter, "what is the appendix vermiformis good for, anyway?" "My dear," answered the eminent surgeon, "the last one I removed was good for that sealskin sack you are wearing."—*Phys. Drug News.*

**RAPID OPERATING.**—During the middle of the last century the fine idea of rapid operating started to grow into an imposing feature of the landscape; but it was blown down before reaching its prime, by anesthesia and by antiseptics.—*Robert T. Morris—American Journal of Obstetrics.*

**SURGERY AND MEDICINE.**—During the past thirty or forty years we forged far ahead of the internists, for our science was better than theirs. Now they are quietly slipping up to us, for their science is getting to be more comprehensive than ours.—*Morris, American Journal of Obstetrics.*

**HYSTERIA AND NEURASTHENIA.**—Mettler distinguishes sharply between hysteria and neurasthenia. The former is a psychophysiologic functional defect, the latter a neurohistologic anatomic defect. One shows physis changeability, the other elemental weakness or failure.—*Medical Record.*

**ANTITOXIN.**—The Memorial Institute for Infectious Diseases, of Chicago, has now extended its list of stations until two hundred druggists carry their antitoxin in stock. This is supplied in the ordinary and also the concentrated form, and is sold to patients at the rate of three thousand units for three dollars.

**SUCCESS.**—The physician's success or failure in a given case depends on his ability to prescribe the

right drug at the right moment. From the moment the prescription leaves his hands he has no control over the quality or strength of the drug he has prescribed—the tool of his profession.—F. Clift, *Utah Med. Journal*.

WAR! WAR!—War has broken out between druggists and physicians in Augusta, Ga. The physicians demand the cessation of counter-prescribing; the druggists tell the physicians to mind their own business! That seems to be exactly what the physicians are doing in making this demand, therefore they persist in it.

"ALKALOIDAL ALLOPATHY" contains many things that are really valuable. We find too great a tendency to violent depletion by catharsis. When it comes to giving one-sixth grain of podophyllin frequently enough to provoke active catharsis in scarlatina, it is neither a safe nor a scientific proceeding.—F. H. Williams, *American Medical Journal*.

PERFORATION.—We note in an exchange an extensive paper on the treatment of perforation in typhoid fever. Hundreds of thousand of cases of typhoid have been treated, by our method of clearing out the bowels and disinfecting them with the sulphocarbolates. Does anybody know of a case of perforation that has followed when that treatment has been effectually carried out? Kindly inform us if you do.

WHERE'S OUR CUP?—Dr. Henry Beates, of Philadelphia, having saved four people from drowning at Atlantic City, last summer, the State Medical Society presented him a beautiful silver loving cup. We believe we have saved a whole lot of people, not from drowning but from sickness, preventing their deaths; and we are awaiting the loving cup. Nevertheless we congratulate Beates on the appreciation shown by his colleagues.

PROMOTION.—Dr. G. A. Denman, of Tuscola, Ill., has been tendered a chair in the faculty of the Ohio Medical College of Toledo. Dr. Denman has been four years in Tuscola, during which time his practice has grown to such an extent that he is compelled to leave, the demand being beyond his strength to fulfill. This will leave a big hole in the Tuscola profession, where Dr. Denman's modern methods have been appreciated by the people.

CHOKED DISC.—J. B. Thomas in the *Long Island Medical Jour.* describes an interesting case of "Choked Disc, Probably Due to Brain Tumor." After three weeks' treatment with potassium iodide in large doses without improvement, he added daily hypodermics of pilocarpine, from grain 1-12 to grain 1-4, the purpose being to increase the eliminative and absorbent action of the mercury and iodide given by the mouth at the same time. After three weeks of this treatment the patient was discharged considerably improved.

TRYPSIN AND CANCER.—The *Cleveland Medical Journal* quotes from a report on trypsin, made in the Cancer Research Laboratories of the London Middlesex Hospital. The final clause reads as

follows: "From these observations we conclude that the course of cancer, considered both as a disease and as a morbid process, is unaltered by the administration of trypsin and amylopsin." Similar results are being obtained in this country. Although the English reports are unfavorable German writers seem to think highly of the treatment.

ARE THERE OTHERS?—We have in Milwaukee a leading druggist who has been a notorious offender in the matter of foisting sophisticated and fake remedies on a gullible public. Some months since, when a manufacturer of fake remedies from a distant state came to this city to exploit his nostrums, this same druggist became a partner in an open and palpable fraud. When approached by a committee of physicians who protested against this fraud he blandly answered: "The medical profession can go to hell. I get my money from other sources."—Harrington, *Milwaukee Medical Journal*.

TOXEMIA OF PREGNANCY.—More significant are persistent vomiting and salivation, not neurotic, resisting treatment; air hunger, mental disturbance, edema of face and ankles, jaundice and discolor of skin, epigastric pain and tenderness over the liver, with amaurosis, suppression of urine, convulsions and coma. With the development of symptoms pointing to autointoxication, stimulation of the eliminating functions of the skin, bowels and kidneys should be instituted, the patient put upon a milk diet, and intestinal antiseptics exhibited.—E. H. Smith, *Utah Med. Journal*.

APPENDICITIS.—Kuhn (*Detroit Medical Journal*), says that before operating for appendicitis, if the pulse is weak give strychnine, gr. 1-30 hypodermically, repeated in three or four hours if necessary. The caution is just, but the remedy chosen is not the best, because strychnine accentuates the sensibility of the cutaneous sensory nerve ends, and this necessitates more anesthetic than would otherwise be required. Digitalin, sparteine, or strophanthin would be preferable for this reason, while cactin seems actually to enhance the effect of the anesthetic.

CEREBROSPINAL MENINGITIS.—The *Military Surgeon* for July and August contains an interesting account of an epidemic of cerebrospinal meningitis occurring at the Naval Training Station, Newport, R. I., in 1905 and 6. Twenty-two cases are described of which six recovered. (Personally we have had no opportunity to make trial of our suggestion—but from a study of gelseminine and cicutine hydrobromate we feel justified in suggesting these two agents as promising to prove useful in this malady. The H-M-C tablets also should be better than morphine alone as a sedative.—ED.)

TANSY POISONING.—In the *Medical Sentinel*, R. J. Smith reports an interesting case of poisoning by oil of tansy. One-half ounce had been taken. Apomorphine was administered hypodermatically until complete relaxation; saline solution given in large quantities; saline laxative was given in tablespoonful doses every three hours. After

eight hours' restlessness a hypodermic of the H-M-C (Abbott), half-strength, was given, with satisfactory results. The patient had no labor pains; the case went on to full term with a fully-developed child. The prompt removal of the tansy by apomorphine prevented, no doubt, any bad effect on the kidneys or uterus. A few whiffs of chloroform were given to control convulsions while awaiting the action of the apomorphine. The patient had three convulsions.

**SCOPOLAMINE.**—Parlavecchio reports 200 operations under scopolamine narcosis. The full dose used was 3 1-2 milligrams, in three injections, though two or even one sometimes sufficed. This drug, he says, should not be used for children under ten years, but is well tolerated by the aged, and by those with nephritis, arteriosclerosis and other conditions in which ether is contraindicated. Vomiting is avoided, and persons of small vitality may be operated upon. It is convenient for operating in the lateral position, or on the back, and is especially valuable in operations on the head and neck.—*La Riforma Med.*

**ANNUAL INDEX.**—We wish to call attention once more to the fact that the annual index is not enclosed with the journal, as has usually been our custom. It has, however, been prepared, and this year is unusually complete. A copy may be had by any reader of the journal for the asking. We only ask that you advise us at once if you desire it.

Again we would emphasize the value of the bound volumes of **CLINICAL MEDICINE**. These not only make a handsome addition to any library, but the doctor who has preserved several years of the magazine and has them in shape for ready reference, has a medical cyclopedia which takes a back seat to none of them.

**THE NURSING PROBLEM.**—*The National Hospital Record* suggests a solution of the nurses' problem—capable nursing for the small wage earner. The plan comprises a National Visiting Nurse Association, with auxiliary societies, each center to be also a training school for assistant nurses, who shall answer calls and attend patients under the supervision of the graduate nurse, the fees to be fixed by the society. This plan has been in successful operation in Albany, N. Y., for several years. Since at least half the people of this richest of lands live on an income less than \$500 a year it is obvious that provision must be made for a service costing less than \$25 a week and boarding.

**APLOPAPPUS IN DYSENTERY.**—In *The Texas Courier Record of Medicine*, Dr. Kibbie describes an interesting case of amebic dysentery. This case had resisted well-directed treatment. Patient was operated upon by Dr. Tuttle and appendicostomy performed and for two months saline and silver irrigations were made through the appendix. No special benefit having resulted, Dr. Kibbie placed the patient upon a fluid extract of aplopappus baylahuen. This was given by the mouth and also injected through the appendical fistula. After sixty days all symptoms of the disease had vanished and the amœbæ could no longer be de-

tected in the stools. This is an important observation and the therapeutic idea deserves to be put to repeated tests. If the correctness of the observation is established, he will have added an important specific to our list.

**IODINE AND PARATHYROID.**—In *The Johns Hopkins Hospital Bulletin* for September, Espes and Cecil contribute a brief but interesting article on the relation of iodine to the parathyroids. Their conclusions are, first: that iodine as a constituent of the parathyroids, may generally speaking be neglected; second, that if present at all, iodine occurs in such minute quantities as to be of no functional significance; third, they failed to find chemical ground for the hypothesis of the thyroid system of organs. Compare these exceedingly careful statements, going not one hair's breadth beyond the evidence, with certain wild and intemperant utterances of other people who proceed to draw deductions which are not warranted by their experiments, on matters concerning which they are not qualified to give opinions. It is a wise man who limits his utterances to what he knows; as soon as he commences to say what he thinks he knows, he gets into trouble.

**PILOCARPINE IN SYPHILIS.**—W. J. Robinson, after considerable experience with pilocarpine in the treatment of syphilis, reaches these conclusions:

1. Pilocarpine is a most remarkable glandular eliminant, and glandular elimination is one of the most important factors in the successful treatment of syphilis.

2. Pilocarpine is of value in all secondary manifestations of the disease.

3. There are many cases which become intolerant to the further use of mercury; the system seems supersaturated and continuing the mercury in such cases means injuring the patient. Discontinuing the mercury, giving pilocarpine in the interval, enables us to resume the former drug with excellent effect.

4. Pilocarpine should be prescribed alone, either in pills or solution, and should be given in doses of two to eight milligrams (1-32 to 1-8 gr.) two to three times a day.—*Medical Record*.

**DIET FOR THE AVERAGE MAN.**—Chittenden, who says we eat too much, offers the following as an average man's diet: For breakfast, one shredded wheat biscuit, one teacup cream, one German water roll, two one-inch cubes of butter, three-fourths cup of coffee, one lump of sugar; for lunch, one teacup chicken soup, one Parker House roll, two one-inch cubes of butter, one slice lean bacon, one small baked potato, one rice croquette, two ounces of maple syrup, one cup of tea, with one slice lemon, one lump of sugar; for dinner, one teacup cream of corn soup, one Parker House roll, one inch cube of butter, one small lamb chop broiled, one teacup of mashed potatoes, apple-celery-lettuce salad with mayonnaise dressing, one Boston cracker split, one half-inch cube American cheese, one-half teacup of bread pudding, one demi-tasse coffee, one lump of sugar. Such a dietary would make the grand total for the day 58.07 grains of proteid and 2,729 calories.—*Med. Times*.

CAN A CHRISTIAN SCIENTIST SUFFER?—The Texas Supreme Court set aside a judgment won by a Christian Scientist for sufferings experienced from her ejection from a street car. The court held that since she believed there was no such thing as suffering, she could not have suffered any. The logic of this decision appears unimpeachable.

ECLAMPSIA.—Rittenhouse (*Ill. Med. Bulletin*) attributes this malady to hyperemia of the Malpighian bodies, and looks for relief to contraction of the bloodvessels, making more room in these inelastic connective tissue capsules. For this he relies on digitalis, especially the fatfree tincture. He begins with ten drops every two hours, and gives whatever quantity the case requires. This excellent treatment is for the patient who presents dropsy and albuminuria. When convulsions have occurred it is obviously not indicated. Here he finds in veratrum a remedy equally satisfactory. He gives ten drops of the tincture every half hour until the pulse falls below 60; the result depending much upon the strength of the tincture employed. He pronounces it a powerful and dangerous weapon to handle, in the necessary doses. It is given hypodermically, diluted only with an alcoholic, as water causes precipitation and clogs the needle.

THE NAVY.—*The Medical Record* says that there are now 64 vacancies in the naval medical service. Congress is asked to render the positions more attractive. Meanwhile temporary appointments may be had, with the prospect of permanent positions after six months spent at the naval medical school. [The naval examinations have long enjoyed the reputation of being the severest tests to which a physician is put in the United States. The fact that so small a percentage of candidates pass is now, we believe, not due so much to the imperfections of the medical course as to the lack of inducements held out by the service. Neither the pay, the rank nor the prospects, are at all commensurate with those afforded by a civil career, to the men qualified to pass such examinations. The services require a \$10,000 man, and offer him less than \$2,000 a year; with a rank at the start which places him with youngsters, with whom association on equal terms is scarcely possible. Until these things are remedied the services will never be fully supplied with men of the quality they require.—ED.]

H. W. WILEY, in the *Mo. Cycl. of Pract. Med.*, presents a paper on "Pure Drugs" that we would like to reproduce entire if we had space. The following extracts will show the wisdom of sending for the journal containing this paper: "If a drug which is employed for therapeutic purposes does not have the qualities it is supposed to contain, the object of its use is necessarily lost." "At least 50,000 different kinds of drug products, proprietary and otherwise, are at present placed on the market in the U. S., only about 1500 described in the U. S. P. and N. F." "The great majority of the manufacturers are endeavoring to supply the trade with the best goods that science and care can produce." As one of the exceptions he mentions a dealer who to boom sales of elixir of valerian added morphine to his, and enjoyed an immense popularity, "the street lined with carriages bringing women

from far and near to procure the drug." One man compared the effort to secure strictly U. S. P. digitalis to "securing the left hind leg of a rabbit, killed by the light of the moon, in a graveyard, by a cross-eyed negro." He closes with a sensible plea for the physician doing his own prescribing.

ECLAMPSIA.—In the *Medical Summary* F. M. Jeffers describes an instructive case of this malady. The child was delivered under chloroform but the convulsions continued, despite Norwood's tincture of veratrum in teaspoonful dose by the mouth, and a hypo. syringe of veratrine, gr. 1-134 each were then given by the mouth, and within half an hour the pulse had dropped from 150 to 80, falling later to 40, with no other ill result than a little nausea. No convulsions occurred while the pulse was held below 60. At 2 p. m., 7½ hours after delivery, another convulsion occurred. The bowels had been moved by calomel and elaterin. Chloroform was used to supplement the veratrine, which was given in doses of four granules, hypodermically, every one to two hours as the pulse demanded. Next morning the purgatives brought away much canned corn and blackberry seeds, and no more spasms occurred. The urine was tested during the attacks and found to be normal. The convulsions were attributed to autotoxemia. The perfect control exerted by veratrine after tincture in huge doses had failed was notable. Venesection was not attempted as the patient had bled freely from a laceration.

ANESTHESIA BY H-M-C.—In *The Medical Herald*, C. R. Lytle, of St. Joseph, Mo., gives an interesting account of one hundred and fifty cases of surgery in which the new H-M-C anesthetic was employed. Dr. Lytle tries hard to be absolutely fair and impartial, and at the same time to so treat the subject as to avoid any suggestion that he is writing it as a write-up for the manufacturers of this article. In the latter object he certainly succeeds. On the whole the article is quite favorable. He tells of one case in which a serious rise in respiration occurred, the patient recovering after prolonged artificial respiration. His conclusions are in favor of the Abbott compound, as it is non-irritating to the air-passages or the kidneys, exerts no appreciable depressing effect on the heart, shows less tendency to post-operative nausea and vomiting, is conducive to less shock in prolonged operations, prevents nervousness on the part of the patient as the hour for operation approaches, has no exciting stage to pass through, and the time required in producing complete anesthesia is lessened. He does not consider the production of analgesia without anesthesia, as claimed, to be taken seriously. He finds much more chloroform to be required than is usually claimed, in addition to the tablet. One of the most annoying features of the new anesthetic to the surgeon in abdominal operations is the rigidity of the abdominal muscles, which not even the additional use of chloroform will overcome, as a rule. The report is on the whole a very fair one indeed, and, we believe, quite favorable to the method, although we feel sure that with further experience and the consequent improvement in technic,



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## GLACIAL PROGRESSION IN THERAPY

Shall we cling to the old, outworn and illogical methods of treatment, thus following in the footsteps of authority, or the better way, meet each indicated condition with the indicated remedy?

A WEALTHY banker in Iowa was attacked with a paroxysm of gall-stone colic. For this his physician administered a hypodermic containing 1-4 grain of morphine. This was repeated every twenty minutes until he had taken four doses. Immediately after the fourth dose was taken the pain instantly ceased, the supposition being that the stone had either rolled into the duodenum or dropped back into the gall-bladder. Then they had a case of morphine poisoning to handle, and for some hours it was doubtful whether the man would live or die. It was one week before he recovered from the effect of the treatment sufficiently to return to his business.

No treatment being instituted in the interval, in due course of time the patient had a similar attack; but not being satisfied with the treatment he received on the first occasion, he called in a young physician recently settled in the town, who happened to be somewhat acquainted with the active principles and the methods of treatment based upon them. Following Dr. Abbott's oft-repeated reiteration of Burggraave's teachings of many years ago this physician gave his patient one granule each of hyoscyamine, strychnine arsenate and glonoin; this was repeated in half an hour, the pains having

been somewhat obviated in the meantime; again in fifteen minutes the dose was repeated, and by the end of an hour the man was so fully relieved that he ceased begging for hypodermics. The pain ceased with the same suddenness as in the preceding instance, but no toxic symptoms followed. Next morning the banker was back at his place of business, fully competent to fulfill his duties. The doctor had made a good customer, and the active principles had scored another triumph.

Not only the active principles, but scientific therapeutics. In such cases morphine acts by numbing the sensory nerves and hindering the transmission of painful impulses to the brain. The morphine is antagonized here by the intense pain of the disease, as it is well known that pain and morphine mutually antagonize and neutralize each other. The moment the stone rolls into the duodenum and the pain is relieved, the enormous doses of morphine the man has taken cease to be antagonized and the drug is left to exert its full toxic influence upon the system of the patient, who is moreover less able to resist it, as he is prostrated by the agonizing pains he has just passed through.

Hyoscyamine acts, however, not by diminishing the carrying power of the sensory

nerves, but by relaxing the spasm of the circular fibers of the biliary passages. The obstacle to the passage of the stone is largely a spasmodic contraction of these circular fibers, and the progress of the stone can only be accomplished as the irritability of these fibers becomes exhausted and they relax. This renders the progress of the stone exceedingly slow and agonizing. Hyoscyamine relieves this spasmodic contraction and relaxes the circular fibers, allowing the stone to progress rapidly through the tube with the minimum of pain. It has long been known that a perfectly smooth stone causes quite as much pain as the rough ones; and the first crude idea, that the pain was due to the irritation of the mucous surfaces by the rough stone, was dissipated by the earlier examinations made of the calculi passed.

It is thus evident that hyoscyamine is more directly a remedy for the pathologic condition than is morphine. Being more exactly suited to the pathologic condition, the relief is correspondingly more direct and satisfactory. As it relieves by obviating the pathologic condition and not by creating a new pathologic condition, as in the case of morphine, there is no intoxication to be combated when the stone is removed from the biliary passages.

We have taught this lesson again and again. It has never been called in question, It is acknowledged to be true by everyone who has studied the pathology of the disease and the physiologic action of the remedy. All those who read CLINICAL MEDICINE, and who have given study to active principles and the methods based upon them, know this and act upon it. The people who adhere to the old, irrational, perilous treatment of the paroxysms by the use of morphine, are those who do not read CLINICAL MEDICINE and who will not listen to the arguments put forth by the advocates of the active principles and of scientific medication.

But truth is mighty and will prevail. Every time a case of this kind occurs, it transfers the patient from the advocate of the old method to the practitioner of the new; and if this process goes on the evil will cure

itself. Those who do not care to investigate the new methods will quietly retire, and leave the field to newer men who are still capable of learning to use modern alkaloidal and other remedies.

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This old, old world is a dreary place  
 For the man whose pass is a frowning face;  
 Who looks for the shadows instead of the light;  
 For the sordid and dull instead of the bright,  
 Who sees but the worry and labor and strife  
 Instead of the glory and sunshine of life.

—E. C. Aurin

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### IT'S WORKING OUT

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Gradually the main features of the Hallberg-Engelhard program are being evolved; and while they do not appear together, they may be put together—and considered with edification by the physician. First, the physician is to be by law forbidden to dispense his own medicine and compelled to do everything by prescription. Second, the pharmacist is only to supply U. S. P. and N. F. remedies, and those receiving the approval of the Council on Chemistry and Pharmacy. Third, the pharmacist is to receive the title of Doctor of Pharmacy. Fourth, the Doctor of Pharmacy is to be empowered to prescribe and administer drugs in case of "necessity." *Nota bene: He is to be the judge of when it is necessary. See?*

By the establishment of these four points a whole lot of troublesome questions will be settled—and a lot of troublesome doctors at the same time. The evolution of the program may probably be watched in the drug journals better than elsewhere. Before you laugh at it too heartily, just read the account of the N. A. R. D. meeting in Chicago, and note the unanimity and enthusiasm with which that meeting welcomed Engelhard's proposal that physicians be forbidden by law to dispense medicine. A vote of thanks, a rising vote, without a dissenting voice, indicated the sentiment of the pharmacists on that question. And little wonder!

While the movement to restrict pharmacists to the U. S. P., N. F. and indorsed-by-Council remedies did not receive much encouragement, yet it was introduced. Its foot is on the carpet. The camel's nose is

in the tent and the rest of the animal may be expected to follow in due time. We are not alarmists; we only say, keep your eyes open. Doctors for doctors.

## THE SICKROOM AND THE LABORATORY

*The Journal of the American Medical Association* for September 28 calls attention editorially to the long-continued contest between the practising physician and the physiologic laboratory, over the question of iron. Although the practising physician knew well, through abundant experience, that the administration of inorganic iron had an almost specific effect in increasing the amount of hemoglobin in chlorotic patients, yet many physiologic chemists were not ready to accept this fact at its face value.

Appreciating the limited power of the animal organism to synthesize complex substances from simple ones, they could not imagine that iron in simple organic forms, given by the mouth, could be built into the enormous hemoglobin molecule. Hence arose the use of many iron compounds from organic sources. They denied the possibility that inorganic iron could be utilized for hemogenesis. Bunge claimed that inorganic iron merely combined hydrogen sulphide or similar products of intestinal putrefaction which otherwise would have combined with the assimilable proteid compounds of iron and thus prevented their passage through the intestinal walls.

It was shown, however, that there is no good reason for believing that there is any unusual formation of hydrogen sulphide or other iron precipitant in the intestine in chlorosis. Besides, the substitution of other precipitants of sulphides, like bismuth or manganese, did not have the same effect as iron. The evidence collected by Meyer seems sufficient to settle beyond reasonable doubt that inorganic iron *can* be and *is* absorbed by the intestines and utilized in the formation of hemoglobin when given in the usual medicinal doses.

We are very glad to read this in *The Journal of the American Medical Association*, and we hope that every member of the

Council of Chemistry and Pharmacy will read it and take it to heart. They need it. We clinicians have been telling these people this for many years, but they would not listen to us.

It is easy to find fault, if one has that disposition. There was once a man who, not being able to find any other fault with his coal, complained that there were too many prehistoric toads in it.

—Mark Twain

## "THERE'S A REASON"

Thomas Beecham is dead. Did you ever hear of him? Surely! The pill man; everybody has heard of him. Why? Because he knew how to advertise. Is that the only reason? Is there any significance in the fact that not only Beecham but every other man who put a purgative on the market made good on it? What lesson has the medical profession taken from this? To sneer at it and decry the habit of taking such articles.

But are we very sure that the cathartics are not needed? How does it come that the whole world takes cathartics, pays millions of dollars for them and makes everybody rich who puts a new "patent" cathartic on the market, if they are not needed? If every phenomenon has its cause, it seems no less certain that every success has a truth back of it.

A good many years ago we had for a patient an old soldier of the Civil War who had been shot in the lungs, and the bullet had carried into his lungs some fragments of his blouse. For many years thereafter he was troubled with a constant cough and occasionally spit up a little bit of the cloth. This man found life made tolerable and easy by the use of a remedy on which he set the greatest store, affirming that he would have been in his grave many years before if it had not been for this remedy. What was it? A common patent purgative pill.

Why did he obtain such relief from this pill? Study our doctrine of intestinal auto-toxemia, its causes and the remedy for it, and especially the results of fecal toxemia, or toxins of fecal origin circulating in the

blood, and see if we cannot find therein a reason for the unexceptional and great success of the purgative. The assumption that credits the success of quackery in all forms to the public being fools is not creditable to the public, much less to us. Where we are right and they are wrong, we certainly must be stupid, if, with such an enormous advantage as this, we are unable to convince the public of it.

Don't be too "cock sure" that what the public generally look upon as a good thing, isn't. Many of the best ideas we have can be shown to have been begot in empiricism, nurtured in "old-womanism"—or so-called quackery and commercialism—growing up in spite of medical science, which later adopted it only too gladly. Don't scoff and sneer in ignorance. Investigate—really look into things. Seek behind the surface for the *real truth*.

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Not in the clamor of the crowded street,  
Not in the shouts and plaudits of the throng,  
But in ourselves are triumph and defeat.  
—Longfellow

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### THE CHEAPEST LUXURY

Cold water may be justly regarded as being the poor man's luxury, its crowning service being conferred by the bath. It is hard to overestimate the invigorating virtue of this noble institution, to which every fine physique owes so much of its vitality. Apart from its physiological effects, moreover, there is an unmistakable moral advantage in bathing, giving rise to a popular adage in behalf of cleanliness. To one accustomed to a morning dip there is no event of the day so momentous in its beneficent influence, and even those who cannot bear the temperature most tonic, having recourse to a warmer plunge, will naturally feel the indescribable glow resulting from its use.

This new exhilaration of bathing is eminently Saxon, and should be widely encouraged in our climate where conditions favor the highest development of the physical man. It is even a redeeming feature of the athletic craze that, of all things, it encourages bathing as a prerequisite to the

finest muscular activity. The deleterious consequences of overtraining or violent exercise are frequently too apparent, yet no such results attend a bath and rub-down. With so many obvious advantages, however, comparatively few people bathe sufficiently, being averse to the inconvenience of the process rather than ignorant of its benefits. Nothing is attained without trouble. It seems a pity that constitutional laziness should deprive us of so simple and ready a boon as bathing.

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### PHYSICAL HARMONY

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It is instructive to observe the marvelous symmetry of a normal physique. Consider, for instance, how from birth to old age each separate organ bears a harmonious relation to every other, the development of each part being constant and uniform, so that the vital energies are finally subdued only through the process of natural, inevitable decay. This perfect adjustment is due to the perfect action of the bodily organism in its entirety, individual functions contributing to the general well-being or health.

Should the heart's action be irregular the supply of blood is correspondingly affected and the distribution of the nutrient elements, requiring proper assimilation, unfavorably influenced. For this irregularity of the heart no remedy will so favorably influence it as cactin. Too much blood may be supplied to one part, and too little to another, a weak circulation occasioning one series of physical phenomena and too powerful an action another, both resulting in a disturbance of the normal adjustment upon which true health directly depends. As remarked before, there is no remedy which will equalize the circulation and regulate the heart under these conditions so well as cactin.

Could we preserve through life an ideal and symmetrical development of every part, the body would maintain its vigor for a much longer span than is possible with our present disregard of hygienic laws—the due consideration of food, exercise and sleep, to which few people devote systematic attention. Given a physical constitution augur-



ing bodily and mental sanity, longevity should naturally ensue. It is through ignorance, laziness, or indifference that life is often curtailed and years that should be happily prolonged subject to premature decline.

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### THE CHICAGO DEPARTMENT OF HEALTH

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There is a whole world of significance in the following extract from the *Bulletin* of the Chicago Department of Health: "In the late summer scarlet-fever and diphtheria threatened South Chicago. The ministers, the teachers, and police, the physicians, the people and the Department, all worked together and stamped it out. The next epidemic was around the stock-yards; again the same agencies got to work and this focus is being rapidly circumscribed."

This means that the Department of Health is conducted with judgment. The influential elements outside of the Department and medical profession, instead of being antagonized, are brought into harmony with them, and the result is, as the above quotation shows, *Success!*

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### SHAKSPERE AND HIS KNOWLEDGE OF MEDICINE

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Many of our readers have doubtless read with pleasure and appreciation Dr. Wainwright's quotations from Shakspeare, in *The Dietetic and Hygienic Gazette*. We hope you have. We hope a great many of you take *The Dietetic Gazette* and read it. It is all good, but nothing that has appeared in the past year has so pleased the editor's literary sense as these quotations from Shakspeare, illustrating the knowledge of medicine and surgery of the great dramatist.

To say that this knowledge is remarkable is to say little. It is one more side of this many-sided man. The wonder is not more that Shakspeare should have had such an insight into medicine than that any man writing in his day should have possessed such an insight.

We are glad to announce that Dr. Wainwright has been persuaded to publish these notes in book form, and that the book has been issued by the publishers of *The Gazette*, from whom it can be obtained by sending the small price of two dollars and fifty cents. No Shakspeare library should be deemed complete without this work. No lover of Shakspeare should be without it; and no physician can possibly spare it from his library. Dr. Wainwright's explanatory notes add immensely to the interest of the quotations.

What physician can afford to be anything less than a cultured, educated gentleman, and how can any man be this who does not render himself familiar with Shakspeare? This was particularly impressed upon us recently, while perusing the chapter on Shakspeare in Taine's "English Literature." We were especially impressed with the total failure of the gifted Frenchman to appreciate Shakspeare, and the place which he filled in English mental development.

To Taine, Shakspeare's work was simply a specimen of an early and crude form of literature, which has since been supplanted by the better developed and more finished productions of the day. Oddly enough, this brought forcibly to mind one of Conan Doyle's amusing skits, in which he describes his French hero, Colonel Girard, in his attempt to grasp the meaning of the English love of fox-hunting.

Men should study literature chronologically, beginning with Prometheus Bound, and certainly not stopping with Shakspeare. Nevertheless, the great writer established the standard by which all previous and subsequent dramatic works, as literary efforts, have been judged and will long continue to be judged.

We are growing old. It is getting more and more difficult for us to feel an interest in things; and we feel personally grateful to Dr. Wainwright, that he has published a book which arouses a new interest in our lives. We hope the work will be so successful as to encourage Dr. Wainwright to give the profession further specimens of this kind.

Poetry is completed. Tennyson and his school gathered up all the remaining frag-

ments, and there is nothing left for the present or the future poet but that debased and debasing imitation of it, that caricature, the burlesque. But the art of reproducing in new forms of beauty the great thoughts that have come down to us for ages is not exhausted; nor will it be, so long as the steady progressing of humanity creates new forms of expression, new modes of thought; and if anyone doubts that old truths need new expression, new presentations, to bring them to the comprehension of humanity, all he needs is to take a copy of *The Dietetic and Hygienic Gazette*, note what it has to say on matters dietetic and hygienic, and go forth among the humanity that environs him and ascertain by direct questioning how far those old truths are so familiar to men as to form a part of their daily lives. The quest will at least be edifying to the seeker.

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He that sweareth  
Till no man trust him,  
He that lieth  
Till no man believe him,  
He that borroweth  
Till no man will lend him;  
Let him go where  
No man knoweth him.

—Hugh Rhodes

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### THE TREATMENT OF DYSENTERY

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In *The Lancet* for December 7 Sandwith discusses the treatment of dysentery.

In the bacillary variety he says that the first drug to be given is something to clean out the bowel; and that it is surprising how much feces may be retained when a man is passing as many as thirty motions in twenty-four hours. It is always safe to assume that the patient, until he comes under your care, has been taking an improper diet. He gives quinine only if there is suspicion of malarial cachexia.

In the amebic form he gives substantially the same treatment in general; beginning with opiates, with morphine hypodermically, following with bismuth salicylate, 15 grains every four hours, or one dram every four hours. If an astringent is advisable tannigen serves well. He speaks favorably of the treatment by ipecacuanha, following

Murchison's method, giving the powder, 20 to 40 grains, in a bolus, with the usual precautions to prevent vomiting. He does not seem to be aware of the existence of emetine and of its superiority. He has never seen any good from the continued administration of calomel, and thinks he has seen deaths in elderly feeble patients caused directly by it.

For twenty years he has preferred the treatment by magnesium sulphate, with or without sodium sulphate. He has scarcely anything to say of quinine, mentioning it simply as used by Strong in the form of rectal enemas; Sandwith, however, preferring silver nitrate.

The writer has been experimenting recently with a chemically pure emetine prepared in the laboratories of The Abbott Alkaloidal Company. This he finds about twelve times stronger than the emetine usually supplied, which is a mixture of the three alkaloids of ipecacuanha, with apparently a good deal of inert matter. The pure alkaloid is somewhat more likely to cause vomiting, because it is dissolved much more quickly than the impure. This necessitates smaller doses. Using tablets containing 1-67 of a grain, however, he has found that patients will usually retain six or seven of these tablets, if swallowed whole, without any water, immediately after the patient lies down in bed, with instructions to remain absolutely quiet for half an hour. As a rule, nausea does not occur under these conditions. Given to patients suffering from the insomnia resulting from the stoppage of an accustomed use of morphine, emetine thus administered has a distinct effect in inducing sleep, although not nearly so marked as in alcoholics. The general nervous condition of the patient, however, on the day following such a dose is markedly improved.

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### SUBSTITUTION IS GROWING

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The evil of substitution in the dispensing of physicians' prescriptions is growing to an alarming extent. The argument that "it is just as good," is an evidence that the article recommended possesses merit, and it is an

outrageous injustice to the physician and patient alike to substitute anything for the medicines prescribed.

The person who is primarily interested in a prescription is the one who writes it, and it is supposed to call for the medicine which in the physician's judgment is what the patient requires. The patient consults the physician because he thinks the doctor can render him valuable service and any practitioner who has any conception of his high calling will prescribe only the remedies he thinks are likely to produce the best results.

No medical man is worthy to be called such if he does not exercise as great care in the selection of his remedies as he would in the preparation of his patient, instruments, and his hands previous to the performance of a surgical operation. To put it stronger, the physician is as culpable who is careless regarding medicines prescribed, as if he were negligent or unclean while performing a surgical operation. Every surgeon of any standing sees to it that his assistants dress his cases properly and that the antiseptic solutions are of the nature and strength that he desires. How many physicians are so careful about remedies they prescribe for internal use? We are charitable enough to believe that the average pharmacist is honest, but we all know that there are some druggists who are not and who would unhesitatingly resort to substitution to make ten cents.

We are suspicious of "economical" doctors and druggists; economy in these professions is dangerously close to dishonesty. It is undoubtedly a fact that substitution could not exist to any great extent, were it not for the carelessness amounting to almost criminal negligence on the part of the physician. The doctor has done but half his duty when he prescribes for his patient. He should see to it that his prescription is properly filled and never will substitution be reduced to a minimum until the physician who writes the prescription demands that it be filled exactly as he wrote it. This editorial will not reform any dishonest druggist but it may some careless doc-

tor. If a man is dishonest there is no more use in preaching honesty to him than there is in preaching cleanliness to vermin. This matter is getting serious and it is time to call a halt. If pharmacists and physicians would but be honest instead of subservient slaves of greed, trifling with life and death in order to acquire a few handfuls of yellow dross, which they know full well they must leave upon the threshold of eternity, we would have no cause for complaint. The two foulest frauds and most heinous humbugs in all hell's unclean hierarchy are unquestionably the unscrupulous and dishonest doctor and druggist.

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#### VALUABLE STUDIES OF ERGOT

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In *The Medical Recorder* for November 23 Alfred P. Livingston contributes a valuable article upon "Ergot." Dr. Livingston has for years made a special study of ergot; hence his conclusions are of exceeding value. In the present paper his observations relating to ergot are derived from its obstetric uses. The general deductions which he thinks warranted from his personal experiences are:

1. Its direct and specific effect is the contraction of unstriated muscular fiber or other involuntary contractile tissue. Here he comes into direct opposition with those who have recently stated that ergot is not useful but harmful in cerebral hemorrhages, because it cannot act on the muscular fibers of the cerebral arteries, since they have no muscular fibers. Dr. Livingston says that no other effect of ergot has more positively been demonstrated than the relief of congested states in the brain. It must therefore act upon some other contractile tissue besides the unstriated muscular fiber.
2. It does not markedly contract that which is normal in tone.
3. It is emphatic in its contraction of that which is lacking in tone.
4. It is striking in such effect in proportion to the recency of occurrence of the atonic state in such fiber.
5. Its widest field of usefulness is its application to the muscular coats or other con-

tractile tissue of weak and relaxed blood-vessels.

6. It tends to equalize vascular tension, etc., to distribute the blood equally throughout the body, to restore or promote functional activity of glands and organs generally and vasomotor centers particularly, to promote sleep, to relieve pain, nervousness and spasm, to prevent or modify the effects of autotoxins and bacteria, to promote assimilation, absorption of exudates and elimination of waste, to relieve nausea, to prevent the ill and dangerous effects of anesthesia, to promote the healing of wounds, to prevent or modify inflammation, to arrest capillary hemorrhage, to relieve narcotic poisoning, and to make the work of the heart more easy and so to prevent its exhaustion or paralysis.

7. It is useful to restore tone in the unstriped fiber of the walls of the hollow viscera, stomach, bowels, bladder, uterus, etc.

8. The prevalent popular notion existing in the medical profession that it is a dangerous drug and likely to produce ergotism, is unfounded as regards the modern pharmacopoeial preparations, at least as regards such as he has used during the past thirty-four years.

9. Its local action upon the stomach is often offensive, especially if full doses are given; its absorption from the stomach is uncertain, both as to promptness and degree, and therefore,

10. Its administration should be limited as much as possible to hypodermic injection, which assures immediate effect, admits of exact regulation of dose, and avoids nausea and other ill effects of its administration per os.

These deductions, Dr. Livingston tells us, are wholly founded upon his clinical experience. This he considers the only reliable guide as to the applicability of any therapy to disease. The indications for the application of ergot, therefore, he considers to be the recognition of lack of tone in unstriped muscular fiber or other involuntary contractile tissue; and on that single thread he hangs all the manifold indications for ergot, and its myriad utilities in therapeutics.

From this Dr. Livingston goes on to produce a remarkable array of indications for the administration of ergot. Practically, his indication is loss of balance of circulation, for if spasm of the blood-vessels exists in any one part, with local anemia resulting, he looks upon this as evidence of weakness of the contractile coats of some blood-vessels, and so gives ergot. If the walls of the blood-vessels are unusually weak or greatly strained he gives ergot. Inflammation of limited areas he treats with ergot. Atony of the hollow viscera, disorders of assimilation and elimination associated with the minuter circulation, impaired functional activity, he looks on as an indication for ergot. In fact, if there is too much blood or too little in any one part, ergot is given.

He thus gives a tremendous range to his favored remedy. In truth, it seems difficult to exclude anything if we allow the correctness of such premises. Dr. Livingston apparently gives to ergot the place which strychnine holds with a large number of the medical profession. Strychnine energizing every function and every tissue in the body, would necessarily be indicated whenever there would be a lapse of functional activity in any part. But then, do we not take the broad ground that illness of any description is indicative of a lapse in functional activity of one or other part of the body?

We cannot believe with Dr. Livingston in his universal application of ergot, nevertheless there is a great deal to be learned from the observations made by this excellent clinician, who has studied this drug for a life-time in the field of clinical therapeutics.

#### TREATING HEART DISEASE

*The Practitioner* for October contains an unusually interesting article on the "Treatment of the Diseases of the Heart," by John Hay. Among other good things Dr. Hay makes the following significant remark: "In the matter of dosage I am convinced that the tendency is to be satisfied with the administration of too small doses of digitalis and squill; and firmly believing that when we are satisfied in a particular case that

digitalis is the best drug to be given, we must push it until the results we are aiming at, or until we get signs of its physiologic action. It may be objected that in so doing we are running risks; but if so, the risks are justifiable."

He also says the dyspnea is due partly to the heart stress and partly to the uremia. "In such patients the exhibition of digitalis often increases the distress, and I have seen marked relief on stopping its administration. The best treatment is purgation with calomel and salines, stopping all food except some water, tea and a little bread and butter; and the administration of such drugs as the benzoates or hippurates of ammonium, together with the infusion of buchu. Strophanthus or citrate of caffeine may be given, as these drugs do not contract the arterioles. For the restlessness and dyspnea in such patients, chloral in my experience is of the greatest benefit and can be prescribed with caffeine if thought advisable."

We might interject the remark here that chloral and caffeine form a chemical union, the result of which is an excellent cathartic.

#### FACTS ABOUT DIGITALIN

Ten years ago Henry Beates, of Philadelphia, published a remarkable paper in which he called attention to the superiority of Germanic digitalin over all the other preparations of digitalis, his conclusions being that this substance is a derivative not contaminated with other active principles, possessing uniform and unvarying strength, relatively free from that property which produces gastric irritation, a powerful stimulant to the whole cardiac apparatus, and a reliable and pronounced stimulant to the vasomotor system, which does not develop cumulative action, the adult dose ranging from 1-10 of a grain as a minimum to 1-2 grain as a maximum. He found it applicable to all lesions of the heart, with the single exception of mitral regurgitation complicated by dilation of the auricle.

Last February, ten years later, Dr. Beates stated that his further clinical experiences have more conclusively proven the thera-

peutic value of this digitalin. During these ten years he has treated numerous cases with this product, in the doses and manner outlined, with the most satisfactory results. He says: "I cannot too strongly urge upon physicians the liberal use of digitalin in cases with circulatory disturbances. In collapse of pneumonia, typhoid fever and in surgical shock as large as two-grain doses in 25 cubic centimeters of salt solution, hypodermically, has been successfully employed in several instances." Dr. Beates, as the head of the Pennsylvania State Examining Board for many years, is a man of unquestionable standing; more than that, in his ability as a clinical observer he has few rivals and no superiors, even in that center of medical culture, Philadelphia. Such testimony is of infinitely greater value than that of any number of even the most accomplished pharmacists.

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A mood, which mayhap brings us pain,  
Will guide our pathways now and then.  
A quest for words of praise, in vain,  
May cast us down with other men.  
But, though the storms ahead we ken,  
There naught can utter gloom impart  
Nor love leave off and hate begin  
When there is sunshine in the heart.

—F. W. Taylor, Jr.

#### THE VOLATILE OILS

One of the numerous neglected fields of materia medica at present is the study of the volatile oils. These are generally set down in the views of the profession as all represented by the oil of turpentine. All volatile oils act in small doses as stimulants, in large as irritants of the urinary passages, through which they are eliminated. Nevertheless, the little study that has been given to them shows an enormous difference in their action.

For instance, they are all believed to have more or less power as antiseptic, and yet experiments made with them show that this varies considerably. The most powerful in this respect is the oil of cassia, and next to it the oil of cinnamon. Oil of gaultheria, oil of eucalyptus and oil of cajuput stand far down the list as compared with the above.

Oil of erigeron has a well-deserved reputation as a hemostatic in hematuria, and the writer has repeatedly availed himself of this power, finding the drug exceedingly effectual in hemorrhages, especially from the kidney. In one case of hemorrhage, from tubercular disease of the kidney and the bladder, however, he found the oil of eucalyptus superior in value to the oil of erigeron.

These oils also all have a useful action in repressing an excessive secretion from any of the mucous tracts, although they probably act with more efficacy on the genitourinary mucosa than on any other. A valued correspondent and old friend, Dr. Thomas Musgrove, of Washington, has just written in a private letter to say that he has found agrimony of considerable benefit in the treatment of his asthma, causing a large decrease of mucous discharge from his lungs. Agrimony contains tannic acid and a volatile oil, on the latter of which its effect largely depends. He says it is the only drug he has used that has relieved him without any bad results. Morphine, atropine, ammonia and many other drugs acted only temporarily, but agrimony caused the mucous to decrease in a week, and for two months he had not needed to take any. He learned of this drug through *Ellingwood's Therapist*, as he tells us.

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Treat your patients so that you will be satisfied with yourself; after all it depends not so much on what others think of you as what you may think of yourself.  
—Albright

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### SCOPOLAMINE-MORPHINE ANESTHESIA

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At the last meeting of the Illinois State Medical Society Dr. C. U. Collins presented an important report upon "Scopolamine and Morphine as a Preliminary to General Anesthesia." Dr. Collins first discussed the question of anesthesia by the older methods. He mentioned the irritating effect of ether on the respiratory tract and the kidneys, also Bevan and Favill's investigations showing that chloroform could produce a destructive effect on the cells of the liver and kidneys. "It is not yet known how ether and chloroform produce anesthesia,

and the profession will be working more or less in the dark, without being able to avoid possible unknown dangers, until this has been discovered. No method of general anesthesia has yet been devised which measures the dose of anesthetic each patient receives in a given time. The preliminary stage, just before unconsciousness, gives very unpleasant sensations to the patient. Many dread the anesthetic more than the operation. While much of this may be avoided by a skilled anesthetist, the natural fear and aversion to passing through unknown dangers, unconscious and helpless, can not be avoided. This feeling is so well recognized that some sudden deaths in the beginning of chloroform anesthesia have been attributed to fright. General anesthetics require constant administration to keep up the effect. After the anesthetic is stopped, the patient feels the smarting, burning pain of the injured tissues for some hours. Following either chloroform or ether there is generally more or less vomiting. In abdominal operations this may cause the abdominal muscles to pull on the incision, adding greatly to the suffering. In any case it adds to the discomfort and postpones the giving of fluids by the mouth."

These dangers and imperfections prompted some of the profession to seek other means of producing anesthesia. Spinal anesthesia has obvious limitations as well as dangers of its own.

Dr. Collins then reviewed the method of producing anesthesia introduced by Schneiderlin in 1900. He also called attention to the fact that some reporters seemed to think that if one of their patients died from any cause whatsoever, after the administration of scopolamine-morphine, this should be blamed for the death. For instance one physician reported a death from cerebral anemia as caused, first, by the effect of trional; second, by the effect of pelvic engorgement incident to the oncoming menstruation; third, by the effects of the scopolamine and morphine; and the report was then headed, "Death Following Scopolamine-Morphine Injection!" Another reported suppression of urine following a prostatec-

tomy, attributing the anuria to scopolamine and morphine, although it is well known that anuria follows operations on the genitourinary tract, and did so long before the scopolamine-morphine combination had been thought of.

He then reviewed Dr. H. C. Wood, Jr.'s, notorious article with which he finds the following faults: Wood gives no reference to the literature, so that no one can go over the same ground and consider the justness of his conclusions. He does not tell the quantity administered in any of the cases nor the method of administration. He says that in 69 percent of cases the anesthesia was unsatisfactory, when according to his own figures the percentage is only 43. Dr. Collins intimates that the same inaccuracy may extend to Wood's conclusions, and says that Wood winds up with the most astonishing statement that he thinks "it must be either a very bold or a very ignorant surgeon who persisted in its use."

Dr. Collins says that he is willing to pay very good attention when a pharmacologist tries to tell him that scopolamine and hyoscine are identical. When the pharmacologist assumes to tell him that as a surgeon he is either bold or ignorant if he pursues a certain course, he must confess that he thinks the pharmacologist outside of his province. Further he adverts to Wood's remark that the danger from ether or chloroform being diminished by the preliminary use of scopolamine and morphine is by no means proved or probable, giving his reasons in some experiments he made on dogs, where ether was used as a general anesthetic, with a preliminary injection of morphine alone, and sarcastically remarks that comment is unnecessary.

Dr. Collins' personal experience began in January 1905, when he witnessed an operation by Ries under scopolamine-morphine. In June of that year he applied the same method himself, successfully, noting one disadvantage, which was that every movement of the operator had to be made slowly as in local anesthesia or the patient would be aroused. This delayed his adoption of the method until Seelig's article appeared, ad-

vocating the small doses preliminary to general anesthesia, when in October, 1905, Collins again commenced the use of the method.

One significant remark he makes is this: "The nurses on the floor were not told of the change in the order of usual things, but before many days they began to ask what we were doing in the operating room that made it so much easier to care for the patients immediately following the operation. They noted that the patients slept for several hours after the operation and there was a marked diminution of postoperative vomiting."

In December of 1905 Dr. Collins had to undergo an operation himself, and having used the preliminary injection of scopolamine and morphine in twenty-five cases, he determined to employ it upon himself. The result was so satisfactory that on his recovery he firmly resolved that his patients should have the benefit of this anesthesia that had added so much to his own comfort. This resolve he carried out, and at the time of his report he had employed it in three hundred and fifty cases.

At first he employed chloroform following the scopolamine-morphine, but for several months he had substituted ether, and had not encountered any of the suggested dangers. In this series he had eight deaths, none of which could be attributed to the scopolamine and morphine. He says that he does not now recognize any contraindications to these preliminary injections. They are given to each patient as a routine measure.

Fifteen of his patients were between 60 and 70 years of age, six between 70 and 80, and four were more than eighty; seven were between six and ten years. Children got the usual dose. In two of the patients the hemoglobin had been reduced 40 and 50 percent by uterine hemorrhages.

He enumerates the following advantages from the method.

1. The tranquil, drowsy state of mind which it produces in the patient before the general anesthetic is administered. If it did nothing else this should be sufficient to

give it a permanent place in the anesthesia of the future.

2. A great deal less of the general anesthetic is required.

3. Scopolamine produces dryness of the throat which is very desirable when ether is administered.

4. The patient usually sleeps three or four hours after the operation. The smarting, burning pain of the incision has usually ceased before the patient awakes.

5. The postoperative vomiting is markedly lessened.

The only disadvantage he says is the varying effect of the single dose on the patient. A few will not get the full benefit of the preliminary, although they are all benefited to some degree.

In the discussion which followed Dr. Channing W. Barrett of Chicago said that in November of the preceding year he began to use the H-M-C preparation, and it gave such good results that he had been encouraged to continue its use. When first commencing its use, the anesthetiser who was experienced in the older method would find the new one interfere with and confuse the reflexes, but not to the extent that morphine alone did. With a little experience chloroform anesthesia becomes very easy with the preliminary hypodermic anesthetic. In some cases the heart-action was decidedly increased, especially when the patient was carried from the bed after the preliminary anesthetic to the operating room; that the pulse moved slower and slower as the operation progressed until it finally became normal. Again, it was noted that patients had an easier time after the operation than after chloroform and ether. He described one case, where the advantages of this anesthetic were particularly notable! The patient was brought in at night; she had lost much blood from a fibroid; a blood-count made next morning showed 40 percent hemoglobin, the red cell count 2,800,000. Under the circumstances the propriety of a radical operation was questionable, but as the patient was under hyoscine, morphine and cactin, it was thought best to clean out the diseased endometrium causing the

hemorrhage. Without further anesthesia the uterus was curetted, and the patient came back a few weeks later sufficiently recuperated for a radical operation.

In another case there was a four months' pregnancy and incarcerated uterus. All efforts to return the uterus to position under general anesthesia had failed. The patient was given an injection of H-M-C, with very little other anesthetic; the abdomen was opened, a pus tube removed, adhesions separated, the uterus brought forward, and the patient continued with her pregnancy, which was now seven months along. He said he had been well pleased with this anesthetic in obstetric cases.

Dr. James W. Hamilton, of Mount Vernon, said that one of his objects in coming to the meeting was to hear this paper. He had been conducting a series of experiments on anesthesia. He remarked here that the average doctor knows more about the technic of hysterectomy than he does about the technic of anesthesia. Last November his investigations of the statistics showed simply that there had been 12 deaths from this method of anesthesia. Up to that time he had employed it in 67 operative cases, three-fourths of them laparotomies. The youngest patient was fourteen months old, the oldest had passed the eightieth birthday. The child had a sebaceous tumor the size of an orange; the oldest patient an ovarian cyst, from which he withdrew an ordinary water-bucket of fluid. The H-M-C preparation was administered at 10 o'clock the night before the operation, the patient slept nicely through the night and all agitation and dread were overcome. The operations were done at 8 to 8:30 a. m. when another injection was given, followed by ether. He did not use chloroform any more. He found it took from one dram to one ounce of ether on an average for these patients, for an ordinary laparotomy consuming from 25 to 50 minutes. Not a single bad experience had been met; no muscular rigidity, which is one of the things most surgeons speak of from laparotomy. He did have, however, muscular rigidity, when the preliminary injection on the previous night was omitted. These



patients could be spoken to and would respond readily, but they were asleep again in a second or two. When disturbed very much the pulse increased markedly; when they had become tranquil the heart-action was decidedly lower. He was very careful about transferring patients from the bed to the operating room, using a wheel carriage, where they remain perfectly quiet. He did not speak to them very much.

He had been using this method in obstetrics, and thought there was where its greatest strength lay. He described one case, a primipara, 39 years of age, with a hard labor. He let the case take its course, as he wanted to watch the action of the drug. The patient delivered herself entirely, but she had a severe perineal tear, reaching clear down to the sphincter muscle. At no time did the woman complain of pain, and each time he spoke to her she answered intelligently. The pains were regular and strong, and the labor perfectly normal. The tear he sewed up without any pain.

This is one of the most important contributions to the subject that has yet appeared, on this side of the ocean. It will be seen that each speaker based his conclusions on abundant personal experience. They all agreed that the supposed dangers and inconveniences vanished, with a little experience in the management of the remedy.

### AUTHORIZED SUBSTITUTION

A strong authorized effort—authorized by pharmacy *in toto*, supported by certain leaders in the organization of the American Medical Association—is being made to enable the pharmacist to substitute his own preparations for standard specialties. This is made ethical on his part by the endorsement of the leaders of his organization, and the now leaders of the medical profession would make it “disorderly conduct,” if no worse, for the doctor to prescribe or use anything but the substitute. This is one of the main points being striven for through the authorized scheme of criticism, substitution and defamation of the independent

doctor which is now so rife and so generally abroad in the land.

Let any doctor test for himself to see if well-known and satisfactory specialties are substituted to his satisfaction by the average retail pharmacist. Prescribe any of the first-class effervescent salts whose formulas, freely given, have been absorbed into the authorized record books of the pharmacist, and see what he will get. Let him order by its official name, cataplasma kaolini, a common clay poultice, from ten stores and see how results compare with antiphlogistine from which the authorized substitute was taken. Let him prescribe from ten stores liquor antisepticus, and see if what he gets corresponds to listerine, which it is intended to replace. Let him prescribe listerine, compare what he gets with an original bottle and see in how large a proportion the substances obtained smell, taste and react like the genuine.

Illustrations might be given indefinitely. The fact is that in all this scheme there is a colossal movement to provide substitutes for everything proprietary; to make it ethical and proper, by authority-endorsement, for the druggist to do what he is so anxious and always so ready to do, and to cram this down the throat of the doctor, nilly-willy; an effort to make “ethical” all along the line essential dishonesty, to wrest from the specialties manufacturer that which of a right is his; to make the doctor (alleging him to be a “scab” if he doesn’t do it) prescribe and accept these substitute things; to insist upon his using what the scheme and the schemers allege that he may and say that he must use, taking from him the right of choice, given by birth in God’s free air and fostered by all Americanism, to do that which in all honor he thinks is best for his patient and for himself.

### EIGHTY-FIVE PERCENT UNCERTAIN PHARMACY GOOD ENOUGH?

*The Daily Telegraph* of London, England, said recently that it would come as a rude shock to those who need physicians, that in the City of London six out of seven bottles of medicine analyzed by the Corporation’s

officials were not properly compounded. Dr. Teed, the public analyst, said, among other telling things, that "a large number of people, even in the medical profession, are of the opinion that drugs are of little use, but from my recent experience I should doubt if they have ever been tried."

This is exactly to the point. There is something more in drug therapeutics than simply writing a prescription, which goes to any druggist that happens to be handy, and is filled by that druggist according to his own notions. Certainly if the London druggist follows the advice recently given by an American pharmaceutical journal and corrects the prescription by making it contain "what he thinks the doctor ought to have prescribed," our medical friends on the other side may well be pardoned for beginning to doubt the utility of drugs.

This is of special importance in England because there the separation between doctor and druggist seems to be only recently becoming a usual thing, instead of exceptional. The *Telegraph* article says that the difficulty in London is not adulteration of drugs, but the use of containers which may be larger or smaller than supposed, excipients being added by the bottle and not being measured. Besides this, the *Telegraph* refers to some articles losing their virtue with age, and others, like the cream of tartar, being liable to impurity.

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#### COLLECTIVE INVESTIGATION: A LEGITIMATE FIELD OF ACTIVITY FOR THE J. A. M. A.

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When the management of *The Journal of the American Medical Association* has got through with its present avocation of vindictive fault-finding; when those marked for "slaughter" have been crucified, drawn and quartered; when the entire medical profession has been restricted to the use of U. S. P., N. F. and Council-approved preparations, and the manufacture of these restricted to the "great ethical houses" designated by the ring, there will still be a field and, we trust, some time for legitimate activity along lines that may be utilized for

the benefit of the medical profession proper—the real man that does things.

One of the most obvious and necessary of these is in the matter of collective investigation. The *Association Journal*, controlling vast amounts of the money of the profession and sustained by its money, which should be used for its benefit and not to promote personal preferences and outside interests, is peculiarly "well fixed" to take up this matter. It is of the utmost importance. There is not a chapter of medicine, obstetrics or surgery in which obscurities and disputed points cannot be found, many of which could be cleared away, and the practice of the profession established on much more definite lines, by accumulating and tabulating the experiences of physicians in every part of the country and in every walk of the profession, the consensus of this opinion from clinical experience being a much safer guide than any dog-kennel and bug-house theory.

Take any affection on the list, for instance malaria: We have never forgotten the comments of an old, experienced physician in the South, on one of the principal textbooks on the practice of medicine now in the hands of the medical students in most colleges. Perusing the chapter on Malaria, he said: "It is a mighty fine article but the writer does not know anything about malaria."

This is true of many of the articles in most of our so-called "standard" textbooks. They are necessarily compilations. In few instances is an author able to deduce from his own personal experiences more than a very small percentage of the statements which he makes.

For this reason we see the authors of popular textbooks compelled, in subsequent editions, to make the mortifying admission that the statements they made in their earlier editions were mistakes, which have to be corrected by investigations made on these points, by special observers—men of experience. It would destroy the superstitious reverence in which the textbook and its author are now held by most medical students, if the latter really knew how little of the work was actually done by the writer

or the compiler of the book, and how few of the statements made therein are based on his own personal knowledge and experience.

No matter how wise any one man may be, or how learned, or how discriminating, or how extensive his research and reading, he cannot possibly know as much as the entire medical profession put together. From time to time, detached and rather feeble efforts at "collective investigation" have been made. Two of these are now conducted by independent medical journals, one in *The New York Medical Journal*, and a less pretentious but even more valuable one in the "Round Table" of *The Medical Standard*.

Small as are these efforts, they are sufficient to indicate what would be the value of such a movement if extended to the entire medical profession of America.

The work is an enormous one, the compilation, comparison and selection of these reports would take the time of a numerous staff of competent men, and the utmost care would be necessary to prevent wrong being done by intrusting such work to men who were prejudiced, instead of giving it to those who would give a faithful picture from the material assigned to them. We know this is hard work. It's a whole lot easier to stand around and find fault with others—a heap easier to tear down than to build up, and perhaps more remunerative for the time being; but what is *The Journal of the American Medical Association* for, and for what better purpose are its large funds being collected, than for exactly such work as this?

Destructive work may be necessary, but there comes a time when the public wearies of it and demands that something constructive shall appear, to show that the operations are after all resultant in a net gain to the rank and file of the Association. The profession's money is being used and for it the profession will demand something more than instruction as to what the doctor is to prescribe and where he is to buy his goods. The pharmacist has had his inning, let him step aside now and give the clinician the floor, and if the present management of the Association's *Journal* isn't

willing to do something for the members of the Association other than to trammel it—then—well, there *are* others.

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Kings and Queens

Are facile accidents of Fame and Chance.

Chance sets them on the heights, they climb'd not there!

But he who, from the darkening mass of men,

Is, on the wing of heavenly thought upborne

To finer ether, and becomes a voice

For all the voiceless, God anointed him:

His name shall be a star, his grave a shrine.

—T. B. Aldrich.

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### THE DEATH OF PROFESSOR SENN

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Dr. Nicholas Senn passed away January 2, 1908. Late in October he returned from a trip to South America. While in the high altitudes of Peru he first became conscious of the affection of the heart, which was the cause of his death.

Professor Senn was born in Switzerland in 1844. He came to this country in 1852 and settled in Wisconsin, receiving his preliminary education at Fond du Lac, and graduating in 1868 from the Chicago Medical College. After serving for eighteen months as an interne in the Cook County Hospital he settled in Ashford, Wisconsin, removing to Milwaukee in 1874. His rise in surgery, his chosen field of work, was meteoric, and in 1880 he became a professor of surgery in the College of Physicians and Surgeons, Chicago, in 1891 taking a similar position with Rush Medical College, removing to this city the same year.

The story of Professor Senn's professional work, of his numerous and important contributions to surgical knowledge, is familiar to the readers of *CLINICAL MEDICINE*. As an operator, as a teacher and as an original investigator he became equally famous. He was one of the first to carry the fame of the American surgeon to the other side of the water, where his work was known and appreciated. His reputation was truly international.

During recent years Professor Senn has devoted much time to travel. He has visited nearly every portion of the world, and has written most interestingly of what he

has seen. He took great interest in military surgery and was active in the national guard, both in Wisconsin and Illinois, and during the Spanish-American war he rendered most valuable service in the field.

Chicago owes him much. His gift of the "Senn library," a collection of invaluable works on medicine and surgery to the Newberry library—now transferred to the Crerar library—was one which placed the entire profession of this city and vicinity in his debt. To Rush Medical College he gave a building that carries his name.

The death of a man like this is truly a national loss.

### HARE ON CACTUS—"BEFORE" AND "AFTER"

**Physiological action.**—The drug has been studied by Myers, Boinet and Teisser, who have found that it causes a distinct increase of arterial pressure, but does not slow the pulse, sometimes increases its rapidity. Myers has also shown that the drug is a stimulant to the vasomotor centers and to the motor ganglia of the heart muscle. It also acts as a stimulant rather than a depressant to the spinal cord.

**Therapeutics.**—Cactus grandiflorus has proved itself a good substitute for digitalis in certain diseases of the circulatory apparatus such as cardiac palpitation and weakness. It has also been found very serviceable as a remedy in cardiac failure the result of valvular disease, but in all such cases seems to act best when added to some more powerful drug, such as digitalis, as it takes the part of an adjuvant. Cactus also acts well in some cases of angina pectoris.

**Administration.**—The dose of the tincture of cactus is 2 to 8 minims (0.1—0.50) and of the fluid extract 2 to 4 minims (0.1—0.25).

**Untoward Effects.**—It is claimed that these do not occur, and that the drug never produces a cumulative effect.—Hare's Therapeutics, Edition of 1905, page 134.

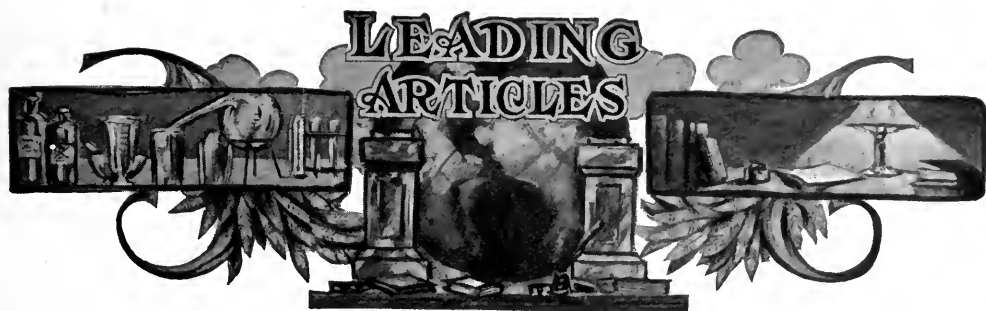
For a number of years a considerable number of practitioners have been under the impression that cactus grandiflorus possesses certain virtues as a cardiac stimulant, while others have considered that its stimulant effect is feeble, but have believed that it exercised a sedative or regulating influence upon the cardiac viscus.

Those who have been most rational in this matter have, however, never believed that cactus possessed very great power, and certain investigations which have been carried on during the last few years seem to prove pretty clearly that even a moderate degree of activity is not possessed by this drug.—Editorial, *Therapeutic Gazette*, Nov. 15, 1907.

medical books before he had had any clinical experience whatsoever. His work therefore was simply the comprehension of other men's observations, and the excellence of the earlier editions of his books was due to the remarkable judgment shown by Dr. Hare in his selections and his ability to judge of the statements made, aided to a certain extent by the physiologic experimentation he had been engaged in, together with Prof. Wood, at the University of Pennsylvania. Each succeeding edition of his book has shown, however, the improvement resulting from his becoming more familiar with the actual practice of medicine; so that the last editions of his books are a vast improvement upon the earlier ones. In fact, I am inclined to think that Dr. Hare himself smiles when he looks over his earlier efforts in that direction. Nevertheless, the fact remains that as late as 1905 he spoke absolutely favorably, not as a quotation but in his own language, of the use of cactus as a remedy in heart diseases; while two years later, in his editorial work on *The Therapeutic Gazette*, he speaks to exactly the contrary effect. Under the circumstances one certainly has a right to ask whether Dr. Hare's latest views concerning cactus are based upon an actual trial of this drug or whether he has simply accepted the statements made by investigators like Hatcher, as he accepted the statements of other investigators in the earlier editions of his "Therapeutics."

The man who occupies the chair of Therapeutics in Jefferson Medical College will always be listened to with respect. We trust that he himself is sufficiently aware of the responsibility resting upon him to show corresponding solicitude as to the absolute accuracy of the statements he may make from that elevated position. Most assuredly he will himself be judged thereby; and if it should prove that he has rashly endorsed statements made by incompetent judges, on insufficient grounds, and has lent the weight of his influence to the dissemination of error, both he and the college with which he is connected must suffer in the estimation of the medical public.

It would seem at first sight as if there was need here of some explanation, since the statements in the two extracts given are completely at variance. This, however, can easily be explained if we take a peep behind the curtain. Dr. Hare commenced to issue



## TALKS WITH AN OLD PRECEPTOR

Being an address given at the opening exercises of  
The Chicago College of Medicine and Surgery (Medical Department of Valparaiso University), September 24, 1907

By GEORGE F. BUTLER, M. D., Chicago, Illinois

Professor and Head of the Department of Therapeutics and Professor of Preventive and Clinical Medicine;  
Physician to Frances E. Willard Hospital, etc.

**A**MONG the beautiful Berkshire Hills of Massachusetts, while the nineteenth century was yet in its infancy, there dwelt a modest lad who humbly tilled the rocky soil and faithfully herded the cattle and bleating sheep.

In the starlight of many a wintry morning he rose to the cold discomfort of the farm chores, stamping about among the shivering cattle and with benumbed fingers churning the milk into the waiting pails. In the midst of these lowly occupations a young mind was unconsciously forging weapons of habit, industry and stability which were to engrave upon the temple of fame a lasting memorial of one of the most noted physicians and medical instructors of New England.

Not far from this unpretentious farm towered the massive form of Greylock, the highest elevation in the state, overlooking the peaceful valley of the Housatonic. There was a sublimity in its noble outlines which in the youth's breast inspired an indefinable enthusiasm. To his glowing imagination it typified strength, as the lightnings shivered their flashing javelins against its rugged front; it stood for advancement, when, while the morning stars still lingered in the heavens, its lofty summit caught the

first beams of the rising sun and proudly heralded the coming day; and when some mighty mystery breathed upon it, and it became clothed in the glorious mantle of spring and the successive seasons, it spoke to him of the marvellous work of the Creator.

So, deep into the heart and fancy of that orphan boy were instilled the impressions of grandeur, beauty and love, destined to influence his life and character.

### *His World of Books*

Soon a new and profounder world was opened to him. He found access to a few books, and the intellectual faculties were awakened, never to sleep till they had crowned his days with enduring fame. He read Locke "On the Human Understanding," Cullen's "First Lines of the Practice of Physic," "Medical Inquiries and Observations," by Benjamin Rush, and other works fortunately supplied through the kindness of an uncle, a country doctor.

It was strong food for his youthful mind, yet he assimilated it with all the ardor of which his emotional nature was capable. Still this mental pabulum was scarce in this rural section, and he was compelled to summon to his aid the inheritance derived from an intellectual ancestry to ob-

tain from his scanty reading the fullest benefit. At all events, these glimpses of a deeper life served to redeem his mind from ignorance and inspire him with a love of knowledge, and especially of medicine, which moved in him an ardent desire to achieve something worthy in the brief span allotted to his earthly career.

The foundation of his dreams had already been laid in a district school, yet, as he gazed, as if with longing inspiration upon the commanding summit of Greylock, other, more thrilling emotions stirred within him, and he thought of the great men—the philosophers, statesmen and warriors who were at that moment making history. The names of those who had risen to eminence in the medical profession came to his lips, and his heart was seized with a lofty ambition to follow their footsteps.

Night after night the lad knelt at the little window of the rafted chamber inhaling the cool, fragrant breath of the night wind, and watching with quickening pulses the stars beaming above the mountainside, as if in benediction of his hopes. Faith, resolve and courage were renewed, and only opportunity awaited the youth, that he might realize his fair ideal. As surely as the embryo within the seed, impelled by the inherent forces of nature, struggles upward to the light, so surely the unalterable decree had gone forth that this aspiring lad should emerge from darkness into the brighter day.

#### *He Becomes a Drug Clerk*

At the age of sixteen my preceptor left the narrow limits of the farm, and friendless and alone stepped bravely forth into the unknown world to win his way to fame.

Finding, by good fortune and his own indomitable energy, a druggist's clerkship in a neighboring village, he adhered to its duties for five years, in spare moments improving his mind by a diligent study of Latin, French, German and general medicine. At the age of twenty-one he entered the Medical School of Harvard University, where he was a classmate of Dr. Oliver Wendell Holmes.

His early struggles and ultimate success are a matter of history. He was ahead of his time. The discoveries made by him and the principles enunciated during a lifetime of studious practice are treasured in medical history, and amply attest the solidity of his learning and the splendid sincerity of his professional career.

During my vacation last August I visited the little city of P—, where the doctor served his early apprenticeship and where he spent the last sixteen years of his honored life, having retired from active practice at the age of seventy-three.

It was my good fortune to reside in this town when he returned to it, and to meet the good doctor almost daily in the drug-store where I was employed. He kindly consented to be my preceptor, and our cordial relations then established were continued by an extensive correspondence after I had left the East to attend Rush Medical College in the city of Chicago.

#### *Some Interesting Letters*

Being honored by a request to deliver this opening address, it occurred to me that it would be an agreeable theme and possibly of interest and profit to the medical students here assembled, freshmen and seniors alike, as well as to the laymen and older physicians, to read a few extracts from letters written to me by this revered and noted physician. For obvious reasons I shall omit names and dates, and first ask your attention to a portion of a letter in which the doctor consented to be my guide and mentor.

"MY DEAR SIR: I beg to acknowledge receipt of your recent favor in which you express a strong desire to pursue the study of medicine. I commend your zeal; yet, I must remind you, as an old and experienced practitioner, that the mere inclination to undertake so absorbing and laborious a task does not necessarily imply special aptitude for it. It would be well, therefore, to ponder seriously the many difficulties attending the experience of the conscientious physician, to whom the misery and suffering of mankind are sacred, and whose

highest aim should be to benefit humanity by alleviating misfortune.

"You remember how a certain king of Egypt wished to commemorate his achievements by building the mausoleum known as the pyramid of Cheops. The enforced labor of one hundred thousand men was required for ten years simply to construct the causeway over which the huge blocks of stone were conveyed from the quarries hundreds of miles distant. By this structure alone was it possible to transport the huge masses of granite forming the pyramids of Ghizeh.

### *The Value of Preparation*

"This is to impress upon you the value of *preparation*, and in all departments of human labor the paramount necessity of forethought is manifest if we wish to attain the highest and most skilful results. The nation that would wage successful war must first compass every detail of military service—see that its commissariat is adequate, its armies properly equipped, and its base of supplies efficient and secure. The same need of preparation attends the successful labors of the architect, the mechanic, the engineer—in fact, of the simplest artizan. I charge you to weigh well this prerequisite to the most praiseworthy achievement.

"As regards preliminary study bearing upon the profession to which you are inclined, I may say from experience that it is unwise to emulate scholarly attainments at the expense of practical knowledge. 'Small Latin and less Greek,' and familiarity with French and German, from the literature of which so much medical learning is derived, this seems to me your safest guide. A correct acquaintance with the English language, an understanding of simple mathematics, of physics, logic, and mental philosophy, you will find useful in your professional career. These branches of study are easily mastered, so far as they relate to your future task, and now is the time to assimilate them, as the foundation of the fabric you would rear.

"In closing, I cannot but recall the philosophical adage of Horace, *festina lente*,

"hasten slowly," upon which largely depends the honorable success you emulate."

### *Decides to Enter Rush College*

The next extract is from a reply to one of mine announcing my intention to enter the spring course of Rush Medical College.

"MY DEAR SIR: I beg to congratulate you upon your decision to enter the spring course at Rush Medical College; the best determination, in my judgment, you could have made. I doubt not you profited by my friendly suggestions touching the importance of careful preparation, and since you have wisely chosen the spring course at the College you will be well fitted to enter the regular course in autumn.

"Let me suggest to you the necessity of diligence in your college studies. You have but a few years in which to enjoy these superior advantages, and every moment devoted to your chosen task is a moment permanently gained in the acquirement of knowledge. Four years at least should be given to the regular course of study, and bear in mind that this period marks but the *foundation* of the professional attainments to which you aspire, the graduate in medicine being only prepared to enter upon a serious study of the subject, aided by the light of practical experience. Indeed, the regular course merely indicates the preliminary training which in the judgment of the faculty enables the student to pursue his studies independently.

"Bring to your task the fine enthusiasm, without which nothing good or great is ever accomplished; realize thoroughly the inestimable advantages now offered you, and to zeal add steadfastness of purpose, that no allurements may divert your thoughts from the primary object of your matriculation.

### *The Choice of Friends*

"Cultivate the acquaintance of upright and earnest associates by whom (as, I trust and believe, by you) the present opportunities are seriously appreciated. Let your company be that of equals and superiors—never of inferiors. Your perceptions

will guide you in your selection, and you will readily discriminate between the high-minded, conscientious votary of knowledge, and the indolent, though agreeable, trifler.

"In your relations with your professors, let me caution you to be always courteous without sycophancy, dignified without undue reserve, frank and unaffected without flippancy. In particular, do not obtrude upon them nor ply them with idle questions which your own diligence and knowledge of your textbooks might easily answer. By earnestness and an unquestionable interest in your work you will soon gain their confidence and assume a place in their estimation which those who seek to curry favor by familiarity may never attain. Above all, show your practical appreciation of your teachers' worth by never shirking a quiz. Your personal recommendations will depend largely upon the sincerity of aim I have sketched, and upon the animus and expression of moral and intellectual faculties we term *character*, that is, *yourself*].

#### *The Manner of Study*

"I would counsel you especially to adopt in your studies an orderly, well-digested system, selected with care and rigidly pursued. Endeavor to realize your highest ideal of a medical student. Choose your exemplar, and remember that a model pupil almost invariably develops into a model physician, while the erratic, unsystematic one, devoid alike of method and ambition, must eventually be contented with the flotsam and jetsam of the profession. Habits of self-control will alone conduce to that intellectual activity and order which will assuredly crown your labors with success.

*"Animum rege qui nisi paret imperat.* Rule thy passions, which, unless they obey, command.

"Cultivate the faculty of concentration in any given line of study on any special subject. Mr. Cary says: 'We go on thinking, thinking, thinking; but how many of us make a systematic effort to so control our thoughts as to make them of value to us?'

"I shall be pleased to learn your impressions of the College, of your professors and teachers, and of your progress in the arduous labor you have undertaken. You are most fortunate in entering upon the profession at this time—an epoch in the history of medicine, when the genius of modern industry and the profound researches of medical science lend a transcendent interest to faithful study. You will have fewer things to unlearn than I had, and are embarked upon a venture which, with patience and singleness of aim, can prove only a triumphant voyage."

#### *The First College Work*

The next letter from which I quote was received two months later, and is dated May 5, 18—.

"MY DEAR SIR: The date of your letter, received last week, shows me that you have attended your college just one month. You are evidently pleased with your surroundings, and favorably impressed with the ability of Professors G. and I. You mention no other instructors, although I know there are very capable lecturers whom you must have heard if you have followed diligently the first year's course.

"Professor G. is widely known as a superior and brilliant operator; yet I observe that you are expected to study only comparative and human anatomy, histology, materia medica, general chemistry and physiology. Nothing is said of surgery and clinical work. Allow me to call your attention to the fact that Professor G. is a specialist, limiting his labors to his particular field only after years of unremitting work as a general practitioner, and a special adaptation for his present task acquired by long familiarity with dispensary, hospital, and clinical duties.

#### *The Orderly Course of Study*

"I am tempted to criticize your consistency, my dear sir, in devoting your time to more advanced studies before mastering the fundamental principles of your profession. As well try to master geometry without previous acquaintance with the



principles of mathematics. Do not attempt to climb the tree of knowledge by grasping the blossoms, but take firm hold of the branches, if you wish to rise. Remember that we must learn to stand erect before we can hope to walk or run; but you are already attempting to fly. No; your fitness for any speciality, however alluring it may seem, must first be demonstrated by success in general practice. Unless you have mastered anatomy and pathology, it is presumptive to undertake surgery. If you cannot diagnose and treat syphilis, by what right do you aspire to comprehend the complications of nose or throat? Not that I would disparage the early, and prevalent, ambition of a freshman to excel in surgery. The desire is laudable, and there is in the heroism and brilliancy of capital operations, the renown of the operator and the impressive circumstances of the arena a fascination which no thoughtful attendant upon clinics can well resist. The scene is a living drama, the solemnity and intellectual character of which no outward accessories can enhance. The very atmosphere is surcharged with noble enthusiasm.

"Master first, however, what these great men had to master; follow patiently in their footsteps; adhere to the prescribed curriculum, and bide your time. Do not forget, above all, that what is worth doing, is worth doing well, and make thoroughness your criterion of faithful study.

"I have written to you, my dear sir, as an old friend, and quite unreservedly, trusting your confidence in the integrity of my motives and in my earnest desire to smoothe for you the early and most significant steps in the profession you have chosen. An experience of more than forty years as instructor and practitioner has confirmed me in the wisdom of the course I cordially advise, and demonstrated to my mind clearly the immense importance of a general plan of study, in full accord with the instruction indicated in your College Announcement."

Many months had elapsed ere I received the letter from which I now quote. Meanwhile, the Medical College, with its hundreds of students and many instructors,

had settled down to the eight months' work with a quiet, irresistible energy and momentum which, like the motion of the great ocean steamer, could be felt and appreciated only by those who participated in its onward course. As the mighty vessel forges ahead, its progress being marked by scarcely a perceptible tremor, yet noted by the smaller craft falling rapidly astern, so the steady movement of the college machinery brought us, unconsciously, nearer and nearer to the haven of the long vacation.

The letter above mentioned is dated December 18. After a brief allusion to other matters my former preceptor writes:

"You may think me volunteering too much advice; but the following quotation from your last letter compels a thoughtful answer. You doubtless remember writing: 'Mr. E., a senior student, who rooms with me, says that it is useless to study *materia medica* and therapeutics. He tells me to 'throw physic to the dogs,' and I don't know but he is right, for our Professor of Surgery, who gave the opening address last fall, said that we should master anatomy, pathology, bacteriology, and diagnosis—that the main thing to do is to make a correct diagnosis. *Materia medica* and therapeutics, he said, could be read up at our leisure; and, given a correct diagnosis, anyone could apply the treatment. In fact, he discourages the use of drugs, and I heard this same professor, in a clinic, assert that drugs are useless, with the possible exception of opium.'

#### *The Importance of Therapeutics*

"Now, my dear sir, with all due respect to your professor, whom you doubtless report correctly, I would ask of what possible value is your complete knowledge of all means of refined diagnosis if you are ignorant of the agents of relief? Would an intelligent employer engage as a carpenter a man who could discourse learnedly upon the principles of architecture and the tensile strength of building material, or dilate upon foundations and roof-trusses, yet who displayed a lamentable ignorance of the names and uses of his working tools

—in short, could not distinguish between an adze and a handsaw?

"But you may reply that the laity are incompetent to judge of your deficiency in this matter. Do not deceive yourself, they are the most competent to judge. Yet, even admitting that your want of comprehensive knowledge concerning the application of remedial agents may not be disclosed by poor results in your daily work, there is a simple way by which information of your weakness may reach the public ear. Your first patient, in all probability, will be a medical case. There is no opportunity to display your surgical skill by performing a laparotomy. No; the only means of communicating the knowledge you are presumed to possess is your written order on the druggist for the very remedial agents of whose properties you are deplorably ignorant, as you are of the method of constructing a correct, classical prescription.

"Eagerly the druggist scans your first directions to him, takes your measure; labels and classifies you. How long, think you, before the profession and the laity will know of your ignorance? You are already judged and by a competent tribunal; the decision is published, and years of successful practice may not serve to obliterate that first unfavorable impression of your capacity.

"Diagnosis, I admit, is absolutely necessary in order to treat disease intelligently; yet there never was a wiser, more truthful utterance regarding medicine than that of Amédié Latour, who said: 'Genuine medicine has deviated from its natural paths; it has lost its noble object, that of curing or alleviating. By thus acting it has rejected therapeutics; yet without therapeutics the physician is nothing more than a useless naturalist, passing his life in discovering, classifying, and describing human diseases. It is therapeutics which elevates and ennobles our art; it alone gives it an object; and I may add that by it alone can this art become a science.'"

There was much more in this letter of great interest to me, causing me to reflect seriously upon my studies and inclination.

But time will permit me to quote no further in this connection.

### *The Senior Year at Last*

During my course at college many precious letters were received, the following from, which I quote, reaching me during my senior year, November 18.

"You have now fairly entered upon your last course of instruction in a medical college before taking your degree. You have, I trust, mastered the various subjects of professional study, and are now prepared to test in a practical way the knowledge you have acquired, through clinics and constant work in physical diagnosis. You are like one who has read much about London or Paris, but who has never visited these cities. You know their histories, and imagine yourself familiar with their topography; yet, should you visit either of them—known to you only through reading—and attempt to traverse their intricate thoroughfares, you would soon find yourself astray. Repeated and studious visits to them, however, would soon enable you to feel at home, and a prolonged residence create a sense of pride that you were perfectly acquainted with the ground on which you trod.

"You have perused many books, and listened to didactic lectures describing citadels of medicine; and now you are to be transported to the scene itself, and actually study its varied features, so that you may know them when you see them and realize their significance. In a word, you are to be both detective and judge. In your new and practical experience every suggestion and hint, objective or subjective symptom or sign, will be critically observed and thoughtfully considered, with the view of determining intelligently the case before you. You will now learn to study the living patient, and not the mere picture of disease as given in the textbooks. Every man, woman and child who now consults you must be examined and considered individually and wisely; and practical,—that is, clinical—study is the only avenue open to you by which to attain a working knowl-

edge of the problems presented. You will learn more perfectly how to employ the means of skilful diagnosis; the stethoscope, ophthalmoscope and microscope. You have studied, and are still studying, the *dead* evidences of disease, the pathological anatomy, as shown in the laboratory and the morgue. But, what is of more importance, you will now study the *life* evidences of disease as illustrated in the clinics.

### *System and Method in Practice*

"As I have already cautioned you, be systematic and methodical from the start. Keep a careful record and ample notes of all cases likely to be of value to you in future practice. Make your diagnosis with deliberation, and remember that there is no such thing as an intuitive diagnosis. Your eminent teacher who appears to make one at sight has acquired this expertness, this rapidity of thought and perception, by long years of patient practice and experienced observation—like the pianist who so easily plays the most difficult classical music, an accomplishment which untiring labor has enabled him to attain.

"I would again counsel you not to slight medicine for surgery, although this latter branch of study is so fascinating and now rides upon the crest of the wave of modern science as applied to your profession. Internal medicine will have its day, medical diagnosis being as yet in its infancy, but surely developing into scientific exactitude. The examination of the stomach contents, of the blood, urine and other secretions, has become absolutely essential in arriving at a correct diagnosis; and you are doubtless aware that a microscopic analysis of the urine is indispensable in determining kidney disease; more so, indeed, than is the recognition chemically of albumin, or the discovery of clinical signs, such as edema, cachexia and cardiac hypertrophy. In fact chemical and microscopic examination of the stomach-contents have rendered the old word "dyspepsia" as meaningless and unscientific as the term "heart failure."

"While the study of bacteriology is of value and has unquestionably widened the

field of scientific investigation, let me caution you against the extreme of attributing every abnormal condition to microorganisms. Do not become a microscopic or bacteriologic monomaniac. The germs you find may sometimes be the result and not the cause of disease. Consider the effects of weakened physiological resistance, environment, heredity, autointoxication, etc. You know that the moment a part of the human system hesitates in its work, or ceases to perform its natural function, in that moment microorganisms attack it. Endeavor to broaden the scope of your researches, rather than narrow it to that of the laboratory specialist, many of whom, it has often occurred to me, resemble a locomotive: grand and powerful when following the narrow railway, but off the track a helpless, inert mass of iron.

"Do not, then, enter upon a particular line of study, as our friend, Walter E., in New York, intends to do, immediately after graduating. There should be no specialists in medicine save in departments requiring such marked dexterity of manipulation as can be acquired and retained only by extensive and constant practice. If, after years of study and reflection, your inclination, your peculiar fitness for the task or your wide experience in some chosen field of investigation warrant the attempt, then, and not till then, can you properly limit your studies to those of the specialist.

"Before engaging in active practice, I would strongly advise you to try for a hospital appointment. The position of interne in any of our large hospitals would be of incalculable service to you, by stimulating self-confidence and greatly augmenting your resources and skill. You would doubtless observe and treat more cases in Cook County Hospital in eighteen months than you are likely to see during the first five years of private practice."

### *A Letter From a Friend*

The mutual friend mentioned in the last letter was a classmate in the College of Pharmacy, who began the study of medicine at the same time with me but entered the

College of Physicians and Surgeons, New York. It will not be inappropriate to quote from a letter received from him, dated a few days previous to that from which I have just read.

"I am sorry," he says, "that you didn't take your course here. New York is the center, you know, and our bacteriologist is 'out of sight.' We have a great laboratory, and I have become very proficient with the microscope. I 'won't do a thing' to the old doctors when I get out. I am already an expert in pathology and bacteriology, and that's what tells. I'll have the doctors running to me inside of a year to make diagnoses for them. You know we are now perfectly familiar with the etiology of diphtheria. It's the Klebs-Loeffler bacillus. Did you ever see one? I don't suppose the Chicago men are 'on to it' yet. I can tell one now the moment I find it. You see there's no use of being scared over a child with membranous sore throat unless you find the bacillus. I tell you, Butler, you made a big mistake in not coming here. Your Chicago men have no reputation. Now, every one knows Thomas. I am one of his assistants, and am going to make diseases of women a specialty. I intend to locate in our old town of P— and take up gynecology. The doctors there don't know anything about that. Our old friend Dr. B. is the best man there, but he doesn't practise, and is a 'back number' anyhow. I don't suppose there was ever a laparotomy done in the town, and there must be lots of such work to do. I'll show them a 'trick or two,' and will have the business inside of two years. Women are the people to bring you business. Well, old boy, I must close. I have a date to assist in an ovariectomy. Write soon.—Walter."

#### *Enters the Profession at Last*

I will quote but once more from my preceptor, the following extract being from a letter received just after I was graduated.

"MY YOUNG FRIEND: You have now entered the noblest profession. It is not a trade; it is the alleviation of human suf-

fering and the pursuit of science for its own sake. Keep alive in your thoughts and daily life the sacred flame of professional and scientific ardor, and you will be warmed and cheered amid reverses, calumny, and disappointment.

"The life of a physician is larger than his profession. He is the center of influence; he touches society in many ways; comes into intimate and confidential relationship with families and communities; and has to deal with questions affecting the public welfare—health, education, temperance, purity—and in every event should be a worthy example to his fellow men and an unfailing power for good.

#### *The Country versus the City*

"You speak of the difficulty of selecting a location. Do not, I pray you, despise the *country* or the country practitioner. Cities are already overcrowded with physicians, and the demand for young doctors is very limited. You will have more practice in rural districts at first, and in practice there is growth, indeed, you cannot grow without it. Remember that the working physician is the thinking physician. Moreover, in the country the diligent practitioner has a much wider range of experience, his varied duties embracing almost every branch of medicine. The earnest physician in the country is constantly pushing to the front in every community where his services are in demand. He must rely upon himself and be master of the most delicate and perplexing situations, assuming responsibilities hitherto unknown to him, guiding, directing and counselling in obedience to the behest of personal conscience, whereas the young man who locates in the city generally relies upon the assistance of other practitioners. The country doctor must fearlessly confront whatever accident or disease may bring to his door and at the same time be a tower of strength to the feeble and timid. Thus any moment of his practice may demand qualities of the highest order: courage to face death; coolness and self-possession to encounter danger; capacity to meet every

emergency; and strength of mind and body to endure to the end.

"From the ranks of the country doctors, medical science has recruited many of the ablest men who ever honored and graced our profession—such men as Marion Sims, McDowell, Edmund Peaslee, and the elder Gross, as well as hosts of others whose studious habits and resolute industry rapidly elevated them to a prominent place in the esteem of their fellows.

"In conclusion, let me repeat that, above its material aspect, you have selected a truly benevolent profession—you have chosen to walk on the gentle, the sympathetic and suffering side of life. Doubt not, my dear sir, that your labors will be richly rewarded, even with tangible emolument, and that there will come to you peace of mind, comfort and the serenity derived from the consciousness of doing good. Yet, whatever vicissitudes attend your career, make yourself worthy of your exalted profession, taking this to your heart as an inspiring motto:

"I may not triumph in success,  
Despite my earnest labor;  
I may not grasp results that bless  
The efforts of my neighbor;  
Yet, though my goal I never see,  
This thought shall always dwell with me—  
I will be worthy of it!"

Ladies and Gentlemen, I am well aware that, measured by its value, this address is already too long; yet I will ask your indulgence a moment more, while I conclude by reading a short extract from a letter received from my friend Walter, who has now been in active practice for some years in the little city where my beloved preceptor lived.

"MY DEAR DOCTOR: It is my sad duty to inform you of the death, on the morning of July 5, of our mutual friend and your preceptor, Dr. B. He appeared to be in as vigorous health as ever until he learned of the death of his esteemed friend and classmate, Dr. Oliver Wendell Holmes, when he began to fail, being confined to his bed and finally sinking away under the shock to his nervous system occasioned by that melancholy announcement.

"I may truly say that I have known no man more lovable or more universally

beloved than our departed friend. In deference to his illness the usual Fourth of July celebration was entirely abandoned, and even children passing the house moved quietly and reverently inquired as to his condition, while the medical students and practitioners of the city, regardless of sect or academic duties, attended his funeral in a body and passed touching and beautiful resolutions regarding the deceased.

"For myself, I wish to say now what I often have been tempted to confess to you, that I sincerely regret the presumptuous, and shallow statements uttered during my attendance at college and my first year of practice concerning the ability of that good and wise man. He was the best friend I ever had, and one of the broadest-minded men I ever knew. He was, moreover, the sincerest friend and most valued counsellor of every physician here; and, though he had long since retired from active practice, his profound interest in his profession kept him fully abreast of the times. He had in the course of his wide experience carefully studied the vibrations of medical thought and progress, and, having seen the pendulum swing from one extreme to the other, had, as it were, carefully pursued his course between Scylla and Charybdis. Ever ready to accord to us the inestimable benefit of his counsel, we could not but profit by his honored advice. His diagnoses were remarkably lucid, conscientious and profound, and we quickly learned the folly of disparaging the attainments of the old and experienced practitioner in favor of the superficial manner in which many of the younger aspirants had been schooled.

#### *A Mistaken Diagnosis*

"I shall never forget my first year of practice, when, imbued with the recollection of college clinics, I was ambitious to shine in surgery, although there was little opportunity to follow this branch of my profession. I had a patient who, I believed in my callow ignorance, was suffering from an ovarian cyst, and had agreed to operate for this malady on a certain morning at nine o'clock. The evening previous, at

about 10 o'clock, the good doctor, in a blinding snow-storm, called to see me expressly, and in a most kindly and considerate manner stated that he had just heard of the intended operation and strongly advised me to reconsider my diagnosis, bringing my microscopic knowledge to bear upon the case, saying in conclusion that he had been consulted by this very patient some time before and after a careful examination had diagnosed the malady as splenic myelogenous leukemia. The doctor was to leave town for Boston next morning on the 4 o'clock train, and had wished to spare me, if possible, the humiliation of a most serious error in professional practice, having braved the elements in my behalf. His urbane manner and his strong presentation of the case precluded all thought of offense on my part, and I was deeply impressed with the consciousness of possibly egregious ignorance in my examinations. I need hardly say that I was heartily ashamed of myself in finding that the doctor's diagnosis was perfectly correct, and his aid in releasing me from what might have proved a very awkward predicament and probably fatal results, filled me with gratitude and admiration. It was a salutary lesson to me; and I may add, that my anticipation of important surgical work has never been fully realized. I have enjoyed a most lucrative and interesting practice, yet the proportion of medical to surgical cases under my care has been as fifty to one.

"Verily, confession is good for the soul, and I must further shrive my conscience

of some exceedingly crude, not to say uncivil, remarks made in earlier days regarding your Chicago physicians. I am now well aware how medical literature has been enriched by the writings of Chicago men; indeed, there are members of your faculty, whom I have met at the meetings of the American Medical Association, whose articles upon medicine and surgery I consider equal, if not superior, to those of any members of the profession in this country. With all my love for New York and my alma mater, I firmly believe that Chicago will eventually be the medical center of the United States—perhaps within the next decade. I therefore congratulate you on being identified with the profession in that city, and especially upon your connection with your medical college, which has done so much to elevate the standard of medical education.

"Your preceptor and my friend was, as you know, an earnest advocate of the higher, broader instruction, his liberality and scope marking the ideal physician. Would to heaven there were more such! He has had his reward in the veneration of the public he served so tenderly and faithfully; and I know of no simpler, more eloquent tribute to the memory of man's worth and honor than the inscription chosen for the monument which is to record the love and appreciation of his fellow townsmen: 'In recognition of his kindness of heart, his unvarying sympathy with human suffering, and his signal virtues, a grateful and appreciative people erects this votive stone.'"

#### ON THE WAY

Plant the seeds of kindness where you pass along,  
 Keep the note of courage always in your song;  
 Though the fates may drive you onward day by day,  
 Spread the cheerful gospel as you go your way.  
 Plant the seeds of friendship everywhere you go,  
 In the days that follow they will grow and grow;  
 Preach the creed of good will all along the way,  
 You may be returning from defeat some day.

—S. E. Kiser

# SPECIFIC MEDICATION AND THE ALKALOIDS

The recognition of specific indications for the use of remedies, or specific diagnosis, and how we may make these "indications" practically useful in the treatment of disease, or specific medication

By JOHN BENSON, M. D., Golphax, Washington

IN the early days of the settlement of this part of the State of Washington, every fall of the year we would have a recurrence of isolated cases of a hybrid fever, known to the laity as mountain fever, but more generally termed by the profession, typhomalarial fever. It lacked the clear-cut features of either typhoid or malaria, but seemed to be a blend of the two, having the appearance of a malarial fever of a low adynamic type. I am aware that some of our eastern wiseacres deny that there is such a disease as typhomalarial fever, but seeing, treating and having is believing.

## *The "Blessings" of Eastern Immigration*

But when eastern immigration began its flow into the state, the settlers brought with them in their train most of the benefits and blessings of their effete civilization, including scarlet-fever, diphtheria and true typhoid. Our towns became more populous, our open grazing country more thickly settled and cultivated, and as the soil was more thoroughly drained and tilled, it also became more polluted and typhoid replaced typhomalarial, until at present it is as rare to find a case of the latter as it was then to find the former.

Soon after harvest begins typhoid fever as a rule makes its appearance. The prolonged hours of strenuous labor, often fifteen or sixteen a day, accompanied by a harvester's appetite, requiring four or five meals daily, the ingestion of large quantities of food, into an organism constantly physically wearied and incapable of elaborating the proper digestive processes, the copious drinking of water from wells and springs that are well-nigh dry from the summer heat and too often receptacles for

the drainage of house and barn, all combined lessen the vitality and resistance of the organism of disease and allow them to fall easy victims to whatever infection may be abroad.

To illustrate the point of my article in the December number of CLINICAL MEDICINE on "Color in Therapeutics," I wish here to give two cases taken from my case-book, whose histories are typical of many others. It is seldom such clear-cut indications for remedies are seen. But on that account they all the more indicate the line of treatment.

## *Two Interesting Cases*

They were both young men, twenty and twenty-two years of age, genuine farmer boys, strong, healthy and robust. Excellent family histories. Both had just put in a month to six weeks of most laborious work in the harvest field. Both were exposed to the same surroundings and conditions. For about a week they had been feeling weak and miserable, without knowing why, until fever appeared, when they went to their homes, and when seen they presented the following symptoms in common:

Both in bed.

Had fever eight or ten days.

Face flushed.

Heavy, sodden appearance.

Complain of dull, heavy headache.

Intelligence dulled.

Answer questions slowly.

Low muttering delirium at night.

Tongue dry and coated.

Sordes on lips and teeth.

Bowels bloated, tense and tympanitic.

Gurgling on pressure, especially in right iliac region.

General tenderness over abdomen.

A few rose-colored spots on abdomen.

Urine scanty, high-colored, offensive.

Stools, three or four a day, thin, watery and offensive.

Morning temperature, 101.5° F. to 102° F.

Evening temperature, 103.5° to 104° F.

Upon the totality of these symptoms we can safely make a diagnosis of typhoid fever, and as safely prescribe for the same. But, shall we prescribe for the disease or shall we prescribe for the individual affected with the disease? While the main characteristics of typhoid are the same in all cases, yet the individuality of the person is often an important factor in the case and the same symptoms may have different manifestations in different persons. I have always made it a rule to study the personal idiosyncrasy of every patient, so here let us make a still closer examination of these cases, and see what further symptoms can be elicited by careful questioning and observation, to assist us further in our individual diagnosis and medication.

#### *Peculiarities of John Doe's Case*

We will begin with John Doe, aged twenty:

Lies quietly in bed.

Seems averse to moving.

Irritable and cross when aroused.

Wants to be let alone.

Delirium, is always working at his last occupation.

Face appears hot and puffy.

Circumscribed red spot on right cheek.

Tongue dry, pale, with whitish-yellow coat.

Breath offensive.

Pulse full and hard.

Slight dry cough with stitching pains in right chest.

Slight dulness on percussion over right posterior thoracic region.

Few moist coarse râles in same region.

Occasional stitching pains in abdomen.

Stools about three a day, thin, bilious-looking, offensive.

Complains of burning at anus.

Urine scanty, brownish-yellow in color.

#### *And Now for Richard Roe*

This one is Richard Roe, aged 22:

Appears in a semicomatose condition.

Falls asleep while answering questions.

Changes his position frequently.

Complains of the bed being so hard.

Delirium, cannot rest for he imagines his body to be broken into pieces, and he cannot get them together.

Marked debility and prostration.

Body slides down in bed.

Face is a dusky, purplish red.

Has a besotted appearance.

Tongue dry, brown, coat in center.

Edges of tongue red and shiny.

Breath very offensive.

Pulse soft and compressible.

Stools about four a day, thin, dark and horribly offensive.

Here, then, we have three distinct sets of symptoms. One set that is common to both patients, and that is characteristic of the disease; one set that is peculiarly those of John Doe alone, and another set especially symptomatic of Richard Roe. It would be wrong to treat those men with the same drugs, for although it is one and the same disease in both, yet each one has symptoms peculiarly his own, and no one else's; and although the history of the cases tells us that they are in about the same stage of the disease, yet, otherwise, they are markedly different.

In John Doe, we find the system making a noble resistance to the disease. His strength and vitality are good. He is irritable and cross, and that is one of the best of signs, for irritability of temper always shows a reserve fund of strength to work on. Besides the typhoid symptoms, we find a slight bronchitis of the right side, as shown by slight cough and stitching pains, and involvement of the liver, as shown by the bilious stools and burning at anus. The pale tongue and whitish coat show that as yet the system has not become profoundly saturated by the septic invasion, and that under proper medication and with no new complications we might expect an uneventful recovery.



So for John Doe we will prescribe the sulphite of sodium, 10 to 20 grains in a glass of water, to render it pleasantly alkaline, and administer it *ad libitum*. In addition we will give one granule of bryonin, gr. 1-67 every hour until effect is noticed and then less often. Also emetine, gr. 1-67, one granule every four hours, to loosen up the pulmonary secretions and relieve the congestion.

With Richard Roe we have an entirely different case to deal with. Here we find the system most profoundly overcome with the septic infection, as evinced in the marked prostration, the low delirium, the dark, purplish color of skin and mucous membranes, the weak heart, and the intense fetor of breath and sweat, urine and stools. It is putrescence itself. It shows that the blood and the tissues themselves are disintegrating under the septic influence. Hemorrhages, nasal and rectal, may be expected any moment, and if we are to save our patient we must prescribe promptly and rightly. What are the two great remedies for putrescence? Hydrochloric acid and baptisin. So to the drinking water of Richard Roe we will add a few drops of hydrochloric acid, just sufficient for a pleasant acid drink, and given freely. Also we will give a granule of baptisin, gr. 1-12 every hour until effect and then less often, also a granule of strychnine arsenate, gr. 1-134 every three hours, to support the flagging heart.

In the first case, the remedies relied upon were sodium sulphite and bryonin. In the second case, hydrochloric acid and baptisin with strychnine arsenate as an adjunct. Why? Why were these remedies given instead of any one of perhaps twenty other remedies that might have been prescribed with advantage?

The sodium sulphite was given because wherever a pallid mucous membrane and a tongue coated with a whitish or yellowish white deposit be found, there is a call for alkalis in the system. Sodium sulphite supplied this demand and being also one of the best of antiseptics it corrects the decomposition going on in the digestive tract.

If the same conditions existed without sepsis the sodium bicarbonate would be the proper alkali to use, or if there were extreme fetidity, as in diphtheria, typhoid and like diseases, the potassium chlorate should be used. We will also use in the case of John Doe a liberal amount of sodium chloride (common salt) in his food, as supplying an often-overlooked want.

#### *The Sulphocarbulates Useful*

The sulphocarbulates might have been given with equal advantage in this case, for my experience has proved to me that the sulphocarbulates can be given with greater results and benefit in those cases where a demand for alkalis exists than in those cases where an acid is indicated. Bryonin was given because it was more closely indicated than any other remedy. It is especially called for in sthenic cases where the inflammation is acute or subacute. It has a special affinity for the right side, right lung, liver, and above all others for the serous membranes, whenever the characteristic sharp, stitching pains are found. The peculiar irritable mentality, the aversion to motion, the dry cough, the complication of the right lung, the right flushed cheek, the bilious stools, all called so plainly for bryonin that it seems as if it could not possibly be overlooked.

With Richard Roe we have a much graver condition. The sepsis is so great that here we have a decomposition of the tissues and blood. Putrescence exists, and with the red tongue it calls for hydrochloric acid. It is indicated by the red tongue, the very offensive odors, the evidences of decomposition and the extreme prostration. Being also the free acid of the gastric secretions, it will aid in the processes of digestion. We shall also advise the liberal drinking of buttermilk, on account of the lactic acid present, which makes a pleasant and agreeable beverage and one that is eagerly accepted by the patient. The hydrochloric acid alone might possibly have been all sufficient for this case, had not the peculiar mentality calling for baptisin been so prominently shown.

Baptisin is preeminently one of the greatest remedies for putrefaction. Given its peculiar mental symptoms, as shown in this case, the great prostration, the foul odors of all excretions, the dusky purplish color of face and mucous membranes, and baptisin can be given with the firm reliance that it will do all that a remedy can possibly do. If the characteristic mental symptoms of baptisin had not shown in this case, I would probably have prescribed echinacea or echafolta in its place.

To make a long story short, lysis took place with John Doe on the sixteenth day and with Richard Roe on the eighteenth day. Both had an uneventful recovery.

Now as to the value of mental symptoms in controlling the selection of remedies in disease, I can see a pitying smile upon the faces of some of my readers at the absurdity of the thing, but let them smile and—learn. I, too, used to give my superior, commiserating smile at the fatuous intelligence that could believe it a fact, and although not from Missouri, I had to be “shown,” yea, not once, but many and many a time, ere I would believe.

Now, the mental symptoms are the most valuable in the selection of the right remedy, and often where two or more remedies are apparently equally indicated in a case, the mentality will cast the deciding vote. For years they have been to me like the Sunday-school boy’s definition of a lie, “A precious ever-present help in time of need.”

Lastly, a word on polypharmacy. Years ago I was called to succeed another physician in a case of typhoid. The patient was a girl about fourteen or fifteen years of age, at about the twentieth day of the disease. As I sat at her bedside after my examination, I observed a stand near by covered with bottles. There were fifty-one of them, ranging from one ounce to eight ounces in size. Some were empty, some a quarter full, some half full, some three-quarters full and some lacked a few teaspoonfuls of being full. Here, in less than three weeks, this aggregation of polypharmaceutical prescriptions had been poured down the throat of this unfortunate child. Can you wonder

that she did not improve as she should, or that the parents desired a change of physicians? Needless to say the stand was cleared, a clean white cover placed upon it, on which rested a small saucer with a few of my granules and tablets, which looked absurdly inadequate to the occasion after the formidable array before present.

The child got well.

I have seen many cases of polypharmacy, but this was the worst of all and wherever found it proved to me one of three things: The physician had no confidence in his diagnosis of the pathological conditions, or he had no confidence in his knowledge of the drugs required, or of their action. So he wandered, day after day, from one prescription to another, ever groping in the dark, and ever hoping that out of so many, at least one missile would hit the mark.

It is seldom that one hour or several hours will make any material difference in the recovery of the patient. Take time to study the sick one, examine him from head to foot, know the conditions of every organ, of every gland, and do not leave him until a thorough knowledge of his pathological conditions is obtained. Then take time to go over the drugs applicable to this condition, and select the most appropriate. Better a thorough working knowledge of twenty remedies than a smattering of two hundred. Know what each one will do and give fearlessly. Outline your course of treatment for the case and stick to it. Do not let every little passing ache or whim of the patient call for a new prescription, as long as the general condition is unchanged. Know what to expect of the remedy and give time for its action.

Be a compass ever pointing to the right, not a weather-vane fluttering to every breeze.

[Splendid! This article is crowded full of practical wisdom. If every doctor in America would read this article thoughtfully and at least *try* to put Dr. Benson’s principles into practice, whether he adopted his methods or not, he could not fail to be a better doctor.—ED.]

# THE TREATMENT OF RHEUMATISM

What rheumatism is, the old way of treating it with the salicylates, what was really accomplished by this method, and the means which the author has found most satisfactory

By WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

WHEN the writer commenced the practice of medicine, the textbooks of that early day stated [that] while cathartics had been recommended as useful remedies for rheumatism, yet the pain and suffering caused by the necessary movements of the patient more than overbalanced any benefit that might be derived from them. One of my earliest clinical experiences was proving the falsity of this statement, by actual trial. In every case I found that the benefit from the action of the cathartics far overbalanced the pain and annoyance suffered by the patient in consequence of the movements necessitated.

When cascara was first exploited one of the claims made in its behalf was a specific value as a remedy for rheumatism. This, however, was abandoned after extended clinical trial, and the parties most interested in the introduction of this remedy stated that there was no greater benefit to be expected from cascara than from any other similarly acting cathartic. This was true. They neglected, however, the opportunity to impress upon the profession the great benefit that all cathartics afforded in rheumatism.

## *What is Rheumatism?*

Let us go back here for a moment to discuss a question, of the utmost importance in the discussion of rheumatism, and which should have come first in this article, and that is, What is rheumatism? Clinical observers are by no means agreed upon this point, and it will be found that comparatively few limit the definition "rheumatism" to its proper line of cases. With the laity almost "anything that hurts" may be called rheumatism, and with many of the profession a similar laxity or lack of precision in statement is altogether too common. We therefore find

that under the definition "rheumatism" are frequently included cases of neuralgia, neuritis, myalgia, spinal irritation, fracture or dislocation of bones, and other traumatisms. and especially those numerous erratic, ill-defined pains, which Haig attributed to uric acid, and which the modern clinician more correctly ascribes to autotoxemia.

Gould defines rheumatism, or rheumatic fever, as a disease characterized by severe, fitful, and shifting lancinating pains in the joints and in the muscles, and inflammatory swelling of the affected parts. An older definition was: an inflammatory disease of the structures about the joints, always attended with fever, tending to shift from one joint to another, and accompanied with a disposition to acid perspiration. This is a good definition. It is difficult to see what else could be included by it besides true rheumatism.

Limiting our consideration, therefore, to the true rheumatic fever, we may say that the physician may practice a long time before he meets a single case in which there is not disorder of the digestion, with acid fermentation in the stomach or the intestines. This being the case, we can readily understand why any cathartic which is administered is curative. We shall not be surprised, moreover, to find many persons holding to the hypothesis that rheumatism is due to an acid generated in the intestines or stomach, absorbed into the blood, and acting upon the points of lowest resistance by coming actually in contact with the weaker cells, through the medium of the circulation. The natural corollary follows that since constipation and the retention of fecal matter in the intestines increase the disposition to fermentation, because they offer greater opportunities for microorganisms to increase

and multiply and carry on their operations, the evacuation of the alimentary canal is one of the principal points in the treatment.

*Rheumatic Remedies.—Intestinal Antiseptics*

This hypothesis is further strengthened by the fact that every remedy that has been advocated as useful in rheumatism possesses the properties of an intestinal antiseptic. We would especially here call attention to the value of such antiseptics as salol, quinine, salicylic acid, and the numberless variations from the salicyl radicle. Each of these have proven useful in rheumatism, each is an intestinal antiseptic of no mean value. One other remedy which has been found useful in rheumatism is resorcin, and this also is an effective intestinal antiseptic. There seems to be more than coincidence in these facts.

We are not arguing for the absolute truth of this theory; in fact, as is our custom in dealing with clinical matters, we simply accept it tentatively as a convenient working hypothesis, and base upon it our therapeutics. Our line of procedure in rheumatism is as follows:

We commence by emptying the alimentary canal. The usual method is to administer a grain of calomel in divided doses, followed by repeated potions of some saline laxative, whichever may be preferred by the physician. This is continued until the bowels are absolutely emptied. It may require colonic flushing to supplement the action of the remedies taken into the stomach. When this has been accomplished the acidity remains, and for this we proceed to give our intestinal antiseptic. When the salicylates were first administered, salicylic acid was given in doses of two drams; this quantity was placed in a pitcher, and an equal or larger quantity of sodium bicarbonate or borate added, with water. The salicylate of sodium was formed, with effervescence. When this was completed the entire quantity was given in six doses, two hours apart. It was rare that the most acute case of inflammatory rheumatism resisted this treatment; if it did, the same dose was repeated the next day.

To appreciate the full value of the salicylic treatment one has to be placed in the follow-

ing condition: I was treating a patient for rheumatism, had been treating him for several days, with such results that one morning the patient informed me he would give me one day longer, when if I failed substantially to relieve him, he would employ another physician. The circumstances of the case were such as to resemble closely the celebrated "ground-hog" case—I simply *had* to relieve that man. I had a family to support, and had nothing to depend on excepting my practice. Accordingly I went to my office, got down my books, and somewhere came upon the suggestion of salicylic acid. I secured the dose above mentioned, took it to the patient's house, made it up for him, and left him with instructions to take it as above advised. The patient at that time was so badly affected that actually, when I called upon him the next day, I looked anxiously at first to see if crape were hanging on the door. It was not, and I summoned courage to open the door and walk into the room. The patient, who had been stretched upon a bed of agony the preceding day, unable to move anything but his tongue, was sitting before the fire, with his feet propped up on a stool, reading a paper and smoking a cigar! The other physician did not get a chance at that case.

*The Preparations of Salicylic Acid*

In due course of time we learned that sodium salicylate did not have to be prepared extemporaneously; next, that there was a difference between the ordinary pink commercial salt of synthetic manufacture and the natural salicylic acid prepared from the oil of wintergreen; also there appeared in due time a chemically pure salicylic acid, and its salts which materially increased the usefulness and lessened the disagreeable and dangerous features of salicylic medication. Aspirin and a host of other derivatives from the primary article appeared, and each of these proved of value in some cases where the commoner forms of this medicine did not prove applicable.

One of the later observations made clinically by the writer, however, seems to him of especial interest. It is this: The effect

of a single dose of salicylic acid, or any of its derivatives, is comparatively limited in time, no matter how large the dose may be. Give 20 to 30 grains of sodium salicylate or salicylic acid to a patient with whom gastric acidity is marked, and this acidity will be effectually quelled for the time, but in half an hour it will reappear. Possibly the effect of the salicylic acid is not so much that of reducing the fever and other inflammatory symptoms, by the simple bulk of the dose, as it is due to its action in checking for the time the gastric fermentation. If this be the case, the doses should be multiplied; and it is not necessary to give at a single dose more of the acid than is sufficient to check fermentation. Accordingly the writer tried the following experiment: Taking the chemically pure salicylic acid, he administered this in doses of 1-6 of a grain; these being given every five to fifteen minutes, according to the severity of the case. The object was that there should at all times be present in the stomach enough of the acid to prevent fermentation.

Unfortunately, from the pressure of other lines of other work, which has taken the writer out of the turmoil of general practice, his opportunities for personal observation have not been nearly so frequent as he would like. Nevertheless, in the few cases in which he has had an opportunity to put this method to the test, it has in every instance proven successful; and he has, in this manner, obtained from two or three grains of salicylic acid in twenty-four hours as satisfactory results as were previously obtained from many times larger doses. The general experience of a number of years of clinical observation has all gone to confirm the correctness of that view of the matter which he has taken as a working hypothesis.

#### *My Way of Treating the Disease*

Clear the bowels completely, give salicylic acid, or salol, or whatever antiseptic you prefer, in doses just large enough to keep the stomach free from fermentation and the consequent acidity. Give these doses so frequently that the fermentation will never have an opportunity to recommence, and keep

this up until the malady has come to an end. There is not much to add to this.

As for local applications, the best are probably such as protect the inflamed parts from pain-inducing contact. Carded wool or absorbent cotton, saturated with a solution of salicylic acid, is probably of considerable value; possibly a solution of sodium carbonate is equally useful.

When the disease seems to settle in a single joint, showing that its structures have been impaired by the inflammation, I have often found it of value to cover the joint with a cap of pure-wool flannel, saturating this with codliver oil, to which a certain proportion of oil of wintergreen may be added; then covering this with a cap of oiled silk, keeping this in position as long as may be necessary, simply adding a little more of the oil each day to compensate what is lost or absorbed.

After the attack has passed, I firmly believe that prophylaxis lies in attention to the alimentary canal, far more than to the wearing of wool and the resort to a supposedly suitable climate.

#### *The Best Antipyretic Remedy*

Unless the gastric irritation is great, the best antipyretic remedy in acute inflammatory rheumatism is undoubtedly veratrine. Of this, very small doses, each gr. 1-134, may be administered, well diluted, and repeated every one to four hours according to the fulness and tension of the pulse. If the stomach is too irritable for veratrine, aconitine may be substituted in similar doses. But if we sometimes see delirium a prominent manifestation, a better remedy than either of these is to be found in gelseminine, of which from 1-250 to 1-100 of a grain may be administered in similar manner every one to four hours. These three remedies relax vascular tension and promote elimination; veratrine being the most powerful as an eliminant, gelseminine the most valuable in preventing delirium; aconitine preferable when an irritable stomach is present. In the small doses recommended neither of these remedies is especially depressing; in fact it may be held, and is held, stoutly by many who are familiar with them, that these small

doses actually increase the vital resistance instead of decreasing it. But if cardiac feebleness be a feature, we may resort to digitalin, or even to strychnine, or to both, in conjunction with the antipyretics mentioned, giving enough of either to bring up the force of the heart to the point which we desire, and sustaining it there.

The best means of preventing secondary inflammatory implication of the heart or pericardium is to put a stop to acute rheumatic affections as quickly as possible; and if the above treatment has been carried out intelligently, we shall not have to recur to Fuller's alkaline treatment for that purpose. If, however, there be reason to infer that some inflammatory deposit has taken place about the heart, as shown by the murmurs remaining after the acute rheumatism has subsided, I believe it is wise to put the patient for a prolonged period upon an active absorbent medication. The best remedies here I firmly believe to be the iodide of arsenic. As an iodine preparation, this is probably the most effective form of this element employed in medical practice. Arsenic, also, by its specific power of inducing fatty degeneration, tends to act upon the newly formed adventitious tissues, more powerfully than upon the permanent structures of the human body, whose resisting power is greater. We therefore aim to give as much of the arsenic iodide as we possibly can, without reaching a dose which will exert a destructive effect upon the normal cells of the body. Give one milligram (gr. 1-67) of arsenic iodide, every two to four hours until irritation of the eyelids shows the beginning of toxic action. This is the safest preparation to use, for both the arsenic and the iodine act in causing ocular irritation. When this symptom presents itself, lessen the dose until it ceases, and keep on with the administration of the remedy. This may be given with advantage for a

period of from three to six months, or until all evidence of the disease has disappeared.

#### *In Cases of Anemia*

If anemia should be present, as it frequently is in the younger cases who are subject to the more severe forms of this inflammatory malady, the arsenate of iron may be added to the foregoing with advantage, or the iodide of iron may be employed. We have in this combination an excellent means of inducing two apparently antagonistic actions at the same time; for the iodine acts effectively in melting down and carrying off the morbid products of the disease, while the iron is at the same time increasing the store of hemoglobin and the number of red blood-corpuscles.

I have not said a word about the serums, or about the specific microorganisms causing rheumatism. Beside the brilliant scientific investigations of such matters, the view I have here presented will appear to be homely and old-fashioned in the extreme. It has, however, the merit of being applicable by every one of us, and of proving satisfactory when applied in actual practice. Moreover it has behind it the testimonies of the ages; and it is unfortunately the case with too many of our recent medical theories that when put to the test of actual practice in the clinical field they fail to work satisfactorily. I am not speaking to discourage investigation along these other lines; but when a physician is attending a case of acute inflammatory rheumatism in its more aggravated forms, especially as occurring in the very young, what is wanted by both patient and physician is the speediest relief that can be given, and not the "showing off" of scientific theorizing. The method of treatment I have laid down will afford this relief.



# SOME HYGIENIC PARADOXES

Rational and irrational notions which persist in the profession concerning diet, exercise, fresh air, humidity, mental activity, recreation and other matters of hygienic importance

By A. L. BENEDICT, M. D., Buffalo, New York

Consultant in Digestive Diseases, City and Riverside Hospitals; Attendant, Mercy Hospital, Buffalo

IN diagnosis, in the management of obstetric, surgical and medical cases, even in the administration of drugs, the young practitioner very soon has borne in upon him the fallacy of rules and the need of attending to the individual case and checking expected results by actual occurrences. Partly because hygiene is conceived of as applied physiology, but largely because it is usually taught in schools and applied in practice only in very general terms, we are not so fully on our guard to detect the need of varying from set rules, while the less immediate results of hygienic, as contrasted with medicinal or mechanic treatment, prevent the recognition of cases in which our dosage of hygienic measures has been excessive or deficient or in which idiosyncratic effects have been produced or in which, for various reasons, it is advisable to discard a rule for an exception.

## *Our Notions Concerning Diet*

A great many of our notions concerning diet—and by “notions” is meant not only lay conceptions but those carried out by physicians of considerable general skill—are really not hygienic rules at all; that is to say, they are not applied physiology in any sense of the word, but are survivals of empiricism and, so far from being supported by any tenable physiologic theory, whatever apparent support they have in practice is due to the very considerable power of the organism to bear starvation and abuse. In some cases they are direct violations of common sense and arithmetic. For instance, the faith that a patient can be nourished on three or four eggs or a quart of meat extract a day is precisely as childlike as when our little ones go into a

fashionable restaurant and try to buy a dish of ice-cream for a penny. Again and again the patient gets well, but, then, a kindly proprietor may actually let the child have the ice-cream. In other instances the child wants to play instead of getting his lesson, so, instead of figuring out a lot of tiresome percentages and adding them up, he puts down a number at random. How many times do we do exactly the same thing when it comes to proteid, carbohydrate and fat in various food-stuffs!

But there really do exist hygienic rules of diet, and there is scarcely another branch of medical art in which scientific facts and processes can be applied in so exact a way, arithmetically, and with so little necessity for allowing for errors that cannot themselves be formulated. Yet, however satisfactory an accurately calculated diet is, as a general rule there are numerous cases in which we must discard all theory and meet the cravings of the individual case. Two points must indeed always be borne in mind, and usually as supplemental to, rather than at variance with, dietetic theory: namely, to administer the ration in proper variety in ordinary culinary instead of sick-room food-stuffs, and to select foods that appeal to the appetite of the patient.

## *Rational and Irrational Exercise*

This is a matter in which the chief therapeutic mistake is in regard to overdose and incompetent filling of prescription. As a rule, any necessary work to which a person is habituated from early life is wholesome and safe, so far as mere muscular strain is concerned, though it may subject the worker to accidental traumatism, including hernia, and so forth, due to unusual and

unexpected strain, to various exposures not directly concerned with the muscular effort itself, and it may produce asymmetric muscular development and even skeletal deformity.

Athletic sports are especially dangerous, for the simple reason that the standard is the maximum one of human achievement or, at least, measurably in excess of that of a competitor, instead of the safe and beneficial standard of the particular individual. Traumatism and the direct results of overstrain, the latter particularly manifested in the cardiovascular system, need only be mentioned. We may also recur to the subject of diet to note the fact that, in training, athletes are especially prone to follow the false notion that one can accumulate strength from an excess of food as one can accumulate financial wealth from an excessive intake of money. However, the studies of Chittenden, Atwater, Benedict, Fisher and many others have already demonstrated the fallacy of the time-honored training diet and the very direct connection of athletics with universities insures a reasonably prompt application of this knowledge.

#### *Disproportionate Muscular Development*

A very important, by no means newly discovered, and still generally ignored danger of athletics is the development of a set of muscles, including the heart, and a habit of anabolism and catabolism out of all proportion to the probable demands of the individual in his after-life. If we think of athletics as a vocation, it is almost unique in its brevity. Anson was familiarly known as "Pop," in allusion to his years, considerably before he was forty. The college athlete usually enters professional or sedentary business life long before he is thirty, and even the professional athlete seldom follows athletics as a vocation much after the age of thirty. Disregarding the occasional demonstration of well-marked cardiac lesions, such as valvular defects and dilation or aneurisms and the like, the ex-athlete has, as a rule, muscles, heart, respiratory capacity, appetite and corresponding hepatic, renal and other glandular activities far in excess

of his daily needs. To keep up his physiologic standards is economically wasteful, often practically impossible. Readjustment, implying atrophy, is inevitable and the badly balanced organism suffers in various ways. If the habits of hearty eating persist, we have the liability to all sorts of intoxications, arising directly from intestinal putrefaction or even gastric stagnation and fermentation, or more remotely from more recondite metabolic processes. Gout, in one of its less typic forms, is especially liable to arise, or we may have an even more frank pathologic state such as hepatic sclerosis, renal degeneration, diabetes, and so on.

The mere fact that the heart is too big for the body is in itself a serious matter, even if there has been no overstrain of valves or of vessels.

Very similar conditions exist in the case of youths who pass directly from farm work or other similar occupations to the sedentary life of students and then of professional practitioners, or who enter sedentary business life more or less directly. Especially disastrous is the effect of repeated readjustments of the balance between the ordinary requirements of the body and hypertrophic muscular and cardiovascular systems, as when after a vacation the individual attempts to return immediately to his former habits of labor. Owing to the length and regularity of vacations, these results are more liable to be noted in teachers than in others.

Thus, in spite of poetry, fourth-reader literature, and even works on hygiene, we are often impressed with the superior powers of endurance, persistence of youth and better general health and longevity of city boys in the ordinary professional and business walks of life.

The writer admits a heterodox view as to the value of gymnasiums, even when athletic contests are excluded and when there is competent supervision and a striving for symmetric muscular development. The indoor air, the sharing of a swimming pool by large numbers of even reasonably clean men, the cold-blooded following out of courses of training without the interest



which attaches to analogous courses in mental studies, nor the value which the latter courses may have in practical application, the consumption of time, are among the unfavorable factors.

Two-thirds to three-fourths of the energy derived from food by the average professional or business man is consumed in involuntary, vital, visceral processes. Whatever mere muscular exercise is necessary to visceral health can be taken in useful or directly pleasurable use of the legs, and, indeed, we need not go beyond the personal experience of the average buggy or automobile-riding physician to learn that good general health is consistent with a minimum of actual physical exercise.

Whether, from the hygienic standpoint, a symmetric muscular development of considerable amount, such for instance as is maintained by the wild animals or by man in a state of nature and such as is established as an artistic standard, is desirable or not, seems exceedingly questionable. From the economic standpoint it is certainly better for the professional and business class of workers to hire soldiers, policemen and laborers to perform their manual labor vicariously. Of course, there are emergencies when every man wishes for the physical strength for defensive or offensive encounter with other men, the lower animals or inanimate obstacles. But there are many more occasions when every individual desires some special mental, artistic or technical equipment to meet an emergency. It is impossible for the individual to be independent of his fellows, except in a state of low savagery in which all are at about the same level and no one has any particular prowess which amounts to much.

Reference may be made to tuberculosis, for which we have learned the lesson that it is not exercise—except in a very restricted sense—that is needed, but rather open air and rest.

While chemic analysis of air shows comparatively slight qualitative and quantitative differences between country air, city air, and even outdoor air laden with offen-

sive odors and indoor air under conditions of fair ventilation, certain gases not normally present in the atmosphere, but due to manufactures, imperfect combustion, etc., are decidedly deleterious even in minute quantities. Pure carbon dioxide is not toxic in the strict sense and can act practically only when present in sufficient amount to interfere with respiratory exchange. Only under exceptional conditions can anything approaching this amount be present. Yet, empirically, we know that when the air contains much more than twice the normal proportion of four-tenths of one percent of carbon dioxide, it does act deleteriously. In all probability the real trouble is due to organic waste-matters of high toxicity which are not as yet susceptible of satisfactory chemical determination.

#### *Troubles of the Fresh-Air Crank*

It must not be forgotten that fresh air often implies exposure to changes of temperature, dampness, local chilling and wetting, and even to bacteria in dirt and dust. The fresh-air crank therefore not infrequently suffers from colds, rheumatism (whatever that may be) and conditions due to superficial ischemia not manifesting themselves as ordinary colds.

It may even be allowable to mention the heterodox view that a tuberculous patient, or one sick with any other disease, should not be subjected to exposure which would be considered excessive for a healthy but delicate person. It may also be asked whether protracted exposure to cold by a tuberculous patient who, to keep warm, must be swathed in clothing and rugs so that the only point of entrance of fresh air is the nose, really derives so much benefit as one more lightly dressed, spending most of the time in a well-ventilated and fairly warm inclosure, where radiation and evaporation from considerable skin-areas is also possible. For some reason there is a modern insistence on cold as well as fresh air in the treatment of phthisis. Unquestionably there is a reflex stimulation from cold, but it is doubtful whether this stimulation does not require an intermittence in its applica-

tion. Also, something closely akin to the benefit of exercise is derived from the consumption of calories in warming inspired air. Whether the air-passages are sufficiently cooled to have any appreciable influence on the vitality of tubercle bacilli seems very improbable and, even if we grant this contention, we may well ask whether there is not a counterbalancing depression of vital processes.

### *The Effect of Humidity*

The exceedingly depressing effect of warm, moist air is sufficiently explained by the interference with heat regulation by evaporation. The writer confesses to being unable to understand the unwholesome effect of "dampness" as such, especially when we consider the somewhat inconsistent condemnation of a dry atmosphere. It is scarcely necessary to call attention to the fact that dampness does not mean watery content of the atmosphere, since identical content of water may imply moist air at a cool temperature and dryness at a warm temperature. Certainly, except for lassitude, which may be partly explained by oscillation, the dampness of ocean-air is not harmful. On the other hand, the decrease in humidity due merely to warming outdoor air in houses would seem to be compensatory to the interference with evaporation and, hence, with temperature regulation by the heavier underclothes ordinarily worn in winter. Obviously, in a room at a temperature of 70° F. and a humidity of 15—20 degrees one evaporates more water than in outdoor summer-air at the same temperature and with a humidity of 40—70 degrees. But it is rather far-fetched to claim that actual damage is done even to the nasal mucosa or to the corneæ by this evaporation, in view of the natural provisions for keeping these parts moist, and certainly the extra demand for water is easily met and rather beneficial than harmful.

For some months the writer has kept track of the fluctuations in humidity of the air. These have varied from practically zero in a hot room with steam-heat up to 75 degrees on rainy days in summer in an

open window. Some hygienists emphasize the bad effect of such variations, but it should be remembered that the natural variation is from about 20 to 75 degrees, and that there is no particular reason to ascribe serious results to such fluctuations. Indeed, the figures give a greatly exaggerated idea of the amount of water present.

The vicinity of pure water does not constitute an unfavorable factor, and the writer is convinced that the harmful effects of "dampness" are due to faulty drainage, development of saprophytic life in surface water, indication of joint contamination of indoor air with products of respiration and combustion, chilling, and various other factors not directly concerned with humidity.

### *Mental Activity*

After reading a certain class of medical literature the writer wonders that our educational system has left anyone free from neurasthenia, not to mention organic disease. As a matter of fact, the boys and girls and young men and women of the last twenty years seem to be more healthy and capable of more endurance than those of an earlier generation. There has been an enormous increase in the proportion of youths who finish the grammar-school, the high-school and the college course, respectively. Compulsory-education laws do not apply to the two latter, and scarcely to the last grade or two of the grammar school. It is inconceivable that parental compulsion would act efficiently against such factors as a significant crippling of strength or that the average well-disposed child would tolerate or even enjoy, as he certainly does, a life that is inherently cruel and unreasonable in its demands.

There is no question but that special courses, with shorter hours, easier lessons and slower progress, should be instituted for children who are organically diseased, physically delicate, handicapped by visual and aural defects or by lack of mental development. The institution of such a course would certainly be feasible in every city. But the fact remains that the present school course, though not perfect, does meet

both the requirements and the abilities of the average American child in a reasonably satisfactory manner. It is even worth while to consider whether a corresponding harder and shorter course might not be established for children of rather more than the average mentality, who absorb a good deal of culture and education at home and who expect to pursue their studies through college and some professional school.

The writer would even go so far as to claim, from personal experience and observation, that mental exercise of reasonable degree and duration has precisely the same favorable influence on the so-called vegetative processes of the body as muscular exercise—probably on account of almost identical circulatory and neurotrophic processes.

#### *The Question of Recreation*

Excepting in cases of physical or nervous exhaustion, it may be questioned whether rest is so much needed as a breaking of routine and pleasurable enlivening of the brain. Some few individuals subject themselves to undue degrees of mental strain. Often this is due to avarice rather than necessity. A colleague once said to me: "Yesterday I saw over sixty patients and I did not get to bed till two o'clock. What do you think of that?" My reply somewhat surprised him—"I think you are a d—d hog." But, with capable men worrying because they could not get enough work to make ends meet, the reply seemed justifiable, barring the method of expression. Even in manual labor organization has secured hours much shorter than the average endurance of the human body and the tension under which modern manual labor is performed is light.

Of course, there are numerous cases in which actual rest of mind or body, or of both, is needed. On the other hand, to prescribe cessation from labor often involves more worry and strain than it relieves, while to advise retirement from interesting work for a man of, say, sixty, often renders him uncomfortable, impresses his on-coming senility upon him and almost inevitably shortens his life.

On the whole, rather frequent, brief vacations, with as nearly as possible complete change of occupation and environment, seem to do the most good, and this fact should be particularly applied to ourselves.

#### *The Element of Enjoyment*

It is important to remember also that the element of enjoyment is important. Largely for this reason cold-blooded attempts to build up muscle and consume calories in a gymnasium have been considered inferior to outdoor sports, even of the simplest kind, as pedestrianism or wheeling. A scientific hobby is valuable for the average man, not so much because of what he may accomplish scientifically, as because it affords recreation and adds zest to outdoor exercise. A trilobite, a rare weed, a few Indian arrow-heads as an object, render walking and bicycling something better than a tread-mill in the open air.

Even purely social functions have a valuable hygienic use if not abused. Aside from outdoor sports of various kinds, almost the only social diversion that has any purely physical value is dancing. As commonly practised at present, with freer and more natural rhythmic movement than formerly, on hardwood floors and with abundant ventilation, it is practically devoid of unhygienic factors, except for those organically diseased or more or less mentally perverted, providing, of course, that it is enjoyed in moderation.

The hygienist should realize that moderation itself should be enjoined in moderation. The extreme limit of endurance should never be reached, either in use of the muscles, tension of the arteries, pumping capacity of the heart, prolongation of effort, postponement of rest or curtailment of sleep, or in any other respect. But the man who engages in any exercise, sport or recreation with an alarm set to mark the optimum length of a walk, the degree of fatigue which may be considered strictly physiologic, or his bedtime, misses the supreme psychic value of an interruption of his routine of work.

Not to mention the fact that the "quitter" is a nuisance to his associates, we should remember that it is as impossible to lay down the mathematic limit of wholesome diversion as of a physiologic process. In both there is a broad zone in which the normal shades into the excessive. Just as any form of recreation, however innocent and however enjoyable in general, loses much of its value if not entered on by spontaneous choice, so its hygienic value suffers by arbitrary curtailment, though such an abrupt ending is often necessary for those lacking in that form of common sense which is at the bottom of all true temperance.

Self-mastery is an important detail in hygienic training and yet it should not go so far as to involve self-slavery. There should be a reasonable compromise between wise forethought, looking toward the general welfare, and an enjoyment of the appetites and recreation which serves its own immediate end. By appetite is here meant a natural, and not a perverted, craving.

Excepting as required for business reasons, it should be remembered that while regularity of habits is conducive to health, it should be a natural regularity commensurate with the quantitative standards of physiology, not a purely artificial regularity only to be attained by clocks and similar man-made machinery. The man who rises and retires at exact times, takes his cold bath, his exercise and his meals by a timetable, who eats so much of this and that viand at each meal, and whose diary would consist of an entry for January 1 and ditto marks for the remaining 364 days of the year, is a nervous crank and is maintained in that condition by a vicious cycle. Such a man may be a very useful cog in the economic machinery of the world, but he is never more than that.

In every phase of hygiene variety and pleasure are important factors. That they must not be allowed to assume the degree of irregularity, excess and self-indulgence, does not detract from their importance.

## OPTIMISM VERSUS PESSIMISM

The condition of mental stasis that leads men to believe that many of the acute diseases are uninfluenced by medication, and how it is brought about

By ARTHUR E. SWEATLAND, M. D., Little Rock, Arkansas

THE words of disregard for the principles laid down in the "clean-up-and-keep-clean" way of treating all kinds of fever, or rather, I should say, fever arising from any cause whatever, shows mental stasis. It is not unusual to hear men prominent in the profession making the assertion that typhoid fever, pneumonia, smallpox, etc., are self-limited and that their term of duration is uninfluenced by medication. Such a position can only be taken by those who are willing to take the sayings of the ordinary textbook as law and gospel, placing their faith upon what they read and allowing the sayings of others to keep them from striking out on free, inde-

pendent lines, making each case one of deep thought and investigation.

### *Those who Condemn and Have Never Tried*

Those who most pessimistically shout against active-principle medication are those who have never tried its virtues and consequently have never found them. This "tommyrot" about "commercialism" won't go. It is a mere subterfuge under which to conceal ignorance or laziness, and in many cases both. Abbott never asked anyone to buy his pharmaceutical products if he could find better somewhere else.

The facts are that the editors of CLINICAL MEDICINE have given us the active princi-

ples in such form that we can apply them with preciseness and definiteness. We can take two granules of veratrine in a condition where tissue-waste is circulating in the blood, and in two minutes the pulse has lost its bounding fulness and if you look at the veinlets in the conjunctiva you will notice that they have decreased in size. We cannot get such definite effects with anything but an active principle. The effects of strychnine can be shown in the same way. Hypodermic medication has gone out of vogue with me since we have the pure, active part of the drug in possession. Strychnine in most instances acts much quicker if dissolved on the tongue than if injected subcutaneously. If you inject it into a vein it acts only a little quicker than if dissolved on the tongue. While the strychnine is being absorbed you can hold the pulse and when sufficient action is produced you can have the patient expectorate the remainder. These conditions hold good with nearly all drugs, so far as the power of absorption in the mouth goes. So it is that, with close observance of the action of drugs, drugs as definitely pure and active as may be, well grounded in our anatomy, both histologically and pathologically, knowing our physiology as best we may, we go forth to battle with disease.

#### *Head off Disease—Eliminate*

As active therapeutists we should look foolish indeed not to try to head off disease, instead of "going along behind, cussing it." The main thing is to know what to do, and then to go ahead and do it. Make your drugs available; this is important in all conditions, and especially in fevers. Eliminate through the bowels, the skin and lungs.

One little patient, a girl of seven years, had fever two or three days before I saw her. The abdomen was tympanitic, the stools were of a pea-soup consistency and foul-smelling, there was nosebleed, there was dropping of one eyelid, the temperature was higher in the evening than morning, and there was bronchial irritation. There was some mental disturbance. After my second

visit my old preceptor saw the patient with me for a number of times and shook his head and said: "If it were my case and in my part of the country, I should certainly expect the girl to be ill for several weeks." Was it typhoid fever? Well, it had all the earmarks, only the bacillus was not found and was not looked for.

The treatment in this case was magnesium sulphate freely given until the intestinal tract was swept out, followed by the sulphocarbolates of zinc, lime and sodium, com-



DR. ARTHUR E. SWEATLAND

bined with one-grain doses of the sulphate of magnesium and calcium every hour. Veratrine was also used to hold the temperature in check and assist in eliminating. Veratrine is a visceral eliminator. At first the pulse and fever showed invasion, but in three or four days enervation was the prominent condition and brucine was given to raise the nerve power and render the medicines available. Magnesium sulphate baths were given frequently, also a pack wrung out of the bath water was a constant application to the thorax and abdomen. The child was free from fever in seven days.

Burgess has shown us what magnesium sulphate will accomplish by way of aiding the skin to eliminate. It is difficult to demonstrate chemically, but clinically it is an easy matter. Such cases as related above I have had run four or six weeks, but it has been years since I have seen any

of these long-drawn-out cases of typhoid fever. I believe the time is near at hand when only in exceptional cases will typhoid fever continue for more than a week.

All glory is due to the men in the field who are carrying on this active therapeutic

work, making each and every case one for earnest research and investigation. The therapeutic nihilist is today a "dead soldier" and the rank and file of American physicians are now pushing into the field of active therapeutics.

## SPARTEINE AND OTHER HEART TONICS

The record of several interesting cases in which this remedy gave relief and where other cardiants had been found unsatisfactory

By C. S. COPE, M. D., Ionia, Michigan

**A**FFECTIONS of the heart, both functional and organic, come to the notice of the practising physician almost daily; and with some a routine treatment is followed for such cases. Some administer tincture of digitalis or an infusion of digitalis leaves, some iron and some potassium iodide, this being about the gamut run by the ordinary Esculapian. Some patients are benefited, some get better in spite of the treatment, and some fail to respond.

*The Thinking Man Welcomes Other Remedies*

But to the thinking man—one who is familiar with the anatomy and physiology of the circulatory apparatus, and has a well-grounded knowledge of the pathological states this apparatus is subject to—the question of treatment and medication presents a most interesting problem, and not content with the above-mentioned remedies such a man sees the need for others, and gladly welcomes any or all that have been found of service, anything in nature that will answer the feeble calls of weakened blood-vessels and impoverished blood-cells in their heroic struggle to maintain the life they have been set to protect. By searching, man has found out many remedies, helps and adjuvants for cardiac ailments, and some that are medicines of great value, such as cactus, pulsatilla, digitalin and other deriva-

tives of digitalis, amyl nitrite, glonoin, strophanthin, cratægus and sparteine.

It is to the doctor feeling his way carefully in his dangerous cases of heart disease that a new help in the drug line

"Comes as welcome as the cry  
That told the Indian isle were nigh  
To the world-seeking Genoese:  
When the land breeze, from wood of palm,  
And orange groves, and fields of balm,  
Blew o'er the Haytien seas."

In sparteine we have such a welcome help. It has an elective action all its own, and should be in every well-selected medicine case, standing shoulder to shoulder in bottled array with digitalin, apocynin, strophanthin, anemonin, strychnine, cornin, glonoin and cactin.

### *Cases Where Sparteine was Used*

The following cases will illustrate its helpful action. Bear always in mind that the Almighty never intended one thing, or one man, or one set of principles, to do all the world's work, but that each in its proper sphere is selected to do its part of the great task that is being hourly accomplished by human hands and with rational methods.

Case 1. A lady, 50 years of age, has had valvular disease of the heart for ten years. Has at times been very dropsical; is anemic and neurasthenic. She is an "alkaloidist doctor's" wife, and her husband has by careful use of selected remedies successfully

carried her through many severe seizures when consulting physicians declared "there was no hope."

During these ten years the vicissitudes of the menopause have come with the other storms that have sought to engulf this frail bark, but so well has she responded to the "smallest possible dose" and "just enough," that a year ago she considered herself well, and was apparently as well and vigorous as any woman of her years. In January of this year, 1907, she contracted the grip and for nearly ninety days had a subnormal temperature and suffered from great debility and depression. She became emaciated and anemic, and angina pectoris came to assume the center of the stage. The case is typical. The least exertion, the movements of the arms, sudden excitement, will cause pain in the heart which radiates to the inside of the arms and stops at the wrists. These paroxysms are followed by extreme exhaustion.

Now by many months of rest cure at her own home, the use of the "heart- tonic" granules, tonics and a carefully regulated diet, she is really improving. There have been times when the heart tonic would not give its wonted help. Then it was found that sometimes cornin would relieve and later sparteine came as a God-send to the doctor in his gallant fight. He is fighting yet and like Paul Jones, he has "not yet really begun to fight." Some men never know when they are whipped.

#### *An Advanced Case of Cardiac Dropsy*

Case 2. A man, 56 years old, was brought to me from a distant state. He had been sick with an old heart trouble and dropsy; had not lain down in bed for four months. He was absolutely helpless and required the aid of four strong men to carry him from the baggage car, where he had to ride, to the carriage which took him home.

I at once gave glonoin, strychnine and digitalin and began with a saturated solution of epsom salt, two tablespoonfuls every half hour. In thirty-six hours he had taken more than a pint of this solution. I also gave calomel and podophyllin, as

his tongue was heavily coated. There was complete anuria. The kidneys had almost ceased to functionate. He breathed in gasps and required to be fanned all the time. His scrotum and penis were like huge bladders, fully distended. I plunged the trocar (without canula) into the end of the head of penis, deeply into the loose tissue, and



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when it was withdrawn the serum came out. In this way and without shock we have in three weeks drawn off a little over eight gallons of this dropsical fluid. The patient breathes easier and the kidneys are taking on normal action.

He now gets, every four hours: apocynin, four granules; scillitin, four granules; calomel, 1-4 tablet. These keep the kidneys and bowels in good condition. As a general tonic, strychnine nitrate, gr. 1-60, is administered every four hours; for the heart, sparteine two tablets, gr. 1-2 each, from two to three times a day.

The patient is much improved. He was a high-liver and in former days a "sport." He called for alcoholic liquors which were

interdicted, but Holland gin is given as needed. The dry diet is strictly enforced. The sparteine has a fine action in the case, the patient expressing great relief from his dyspnea while under its influence.

*A Missionary's Wife Helped by Sparteine*

Case 3. Was reported to me by a physician who is a missionary just returned from a five years' sojourn in Central Africa. It is well known to those who practise in the tropics that the color of the blood in the veins and arteries is not so decided in color as is that of persons residing outside the torrid zone. This is probably due to the extreme heat and the lack of hemoglobin brought on by malarial and other poisons, so that the white resident, sooner or later succumbs to debility, characterized by loss of vitality and weakened heart action.

The wife of the missionary was taken sick with a tropical fever more than a year ago and so fierce was the struggle it was feared she must die, but she survived only to find herself bed-ridden. She could not sit up because of a weak heart and the faintness that followed the effort. For many months they had been treating her and hoping for the day she should be able to start home.

*The Result of "Home" Missionary Work*

Now comes a little story of the alkaloidal ministrations. When these missionaries were here, five years ago, I called their attention to CLINICAL MEDICINE and to the

alkaloids and secured for them a copy of the journal and a year's subscription and a bill of alkaloidal goods, which reached them in three months from the time of sending. One day while reading the journal, they chanced upon an article on sparteine, and they both said: "That seems good to us." This was before the wife's illness. In making their order for goods from London, England, which comes once a year, they ordered one bottle of sparteine hypodermic tablets, as the coated granules do not hold up so well in hot climates. These goods arrived while the wife was ill, and having received the boxes the black boys soon removed the covers and the precious bottle of sparteine was found and a hypodermic given. The change for the better was apparent from that very moment. It had an elective action in this case surely; the pain and weakness were relieved and the convalescence hastened.

Apropos of this incident comes another from the Congo. The doctor said that when he returned to his station the resident physician called his attention to a native nearly dead with dropsy. The question was asked, "Have you used apocynin?" and the answer was, "We never heard of it." It was given and the patient made a rapid recovery. This, too, was a case where the elective action of the drug was manifest. It will not do so in every case. Study to show thyself approved, rightly selecting the drug to be used.

THE things which our friends do with and for us, form a portion of our lives; for they strengthen and advance our personality. But the things which our enemies devise against us do not form part of our lives; we only experience them, reject them, and guard ourselves against them as against frost, storms, rain, hail, or any other external inconvenience which may be encountered.—Goethe.



# A STUDY OF THE PRINCIPAL ALKALOIDS

With special reference to their periods of absorption, the duration of their action, and the methods and routes of their elimination from the body

By J. M. FRENCH, M. D., Milford, Massachusetts

**A**MONG the most important points to be understood in the study of any drug are the rapidity or slowness of its absorption, the duration of its action, and the methods and channels of its elimination. Though this information is of the highest importance, yet it is but lightly touched upon in most of the textbooks on materia medica and monographs on the actions of the various drugs. Something indeed is frequently told as to the channels through which the drug is eliminated, but the other points are nearly always neglected entirely or treated in a very insufficient way. Yet without this knowledge it is impossible to use the drug intelligently, or if it is an agent of great power, as in the case of the principal alkaloids, even with safety. A knowledge of the rapidity of absorption enables us to know how soon after the administration of a drug to look for its effects; of the duration of its action, how often the dose should be repeated; while knowing the channels through which it is carried out of the system enables us to understand what organs and functions will be chiefly affected by its elimination.

## *Upon What Absorption Depends*

The rate of absorption of a drug depends upon three distinct elements: First, the nature of the preparation which is to be employed, whether decoction or infusion, tincture or fluid extract, solid extract or alkaloid. The vehicle in these cases has considerable influence, as whether aqueous or alcoholic, and whether given hot or cold; also the method of administration, whether by the mouth or rectum, or hypodermically. Second, the condition of the patient at the time of administration, as to his vigor and vitality or the lack of it, the rapidity and

strength of his circulation, the condition of his stomach and intestinal canal, whether full or empty, etc. Third, the nature of the drug itself; and it is to this particular phase of the subject that we shall devote our attention at this time.

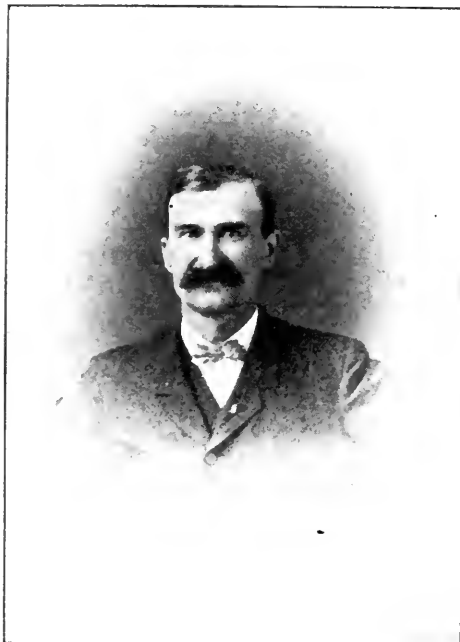
In our discussion of this subject we make no claim to having engaged in any physiological experimentation or original investigation of any kind. The method which we have followed has been to study carefully the reports of those who have made these original investigations, with a view of gathering from them the desired information. In a few instances the work has been comparatively easy; but more often we have been able to find but little information on the points for which we were seeking, or the statements made are blind, insufficient, unsatisfactory, or often contradictory. We have endeavored to give first the conclusions concerning which there is a general agreement, following these with a statement of the differing conclusions which seem worthy of notice, sometimes giving the authorities. We realize that at best the little we have been able to glean will be very unsatisfactory, and yet the sum of many pages of reading is compressed in a few lines. If it is of no further value, at least it may serve to call attention to the importance of the subject, and lead to further investigation.

## *Only Four Alkaloids Discussed Here*

No class of remedies is of more value, greater power or more positive action, than the alkaloids and other active principles of plants. Hence we have begun our studies with a few of the best-known of these. In this paper we shall consider only four, namely, atropine, morphine, strychnine, and

quinine. In a future paper we hope to be able to present the facts in relation to a larger number of similar but perhaps less important alkaloids.

*Atropine* is rapidly absorbed when administered by the mouth, its effects being manifested within a very few minutes. The effects of a single medicinal dose are stated by most authorities to pass off in



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two or three hours. Van Renterghem, however, states that the effects of a moderate dose of atropine pass off in the same order in which they came on, in about twelve hours, except the ocular, which may last longer. Lutze states that belladonna effect acts over five weeks.

Atropine is eliminated almost entirely by the kidneys in the urine, and the urine of an atropinized animal will dilate the pupil of another animal. Minute quantities may pass off by other avenues, as the intestines, when the dose is large. Cushny says that when atropine is injected in the dog, it is excreted in small quantities in the urine, but most of it undergoes complete oxidation in the tissues.

*Morphine* acts quickly as compared with opium, and all opiates are rapidly absorbed when administered by the mouth. The effects of an ordinary dose can be felt in ten to fifteen minutes after it has been taken. When administered hypodermically the effect is much more rapid, and morphine given in this way can be detected in the saliva within three minutes afterward.

As is indicated by its rapid absorption, its effects are manifested for only a short time. Its elimination commences very quickly, and in the case of a single moderate dose is practically completed in a period of time which is variously stated at from twenty-four to forty-eight hours. Lutze states that its period of action is only a few hours.

Morphine is excreted mainly by the digestive tract, in the saliva, gastric juice, intestinal fluids and by the kidneys. After a hypodermic injection it is found in the urine, feces, sweat, tears, milk, saliva and gastric juice.

*Quinine* is absorbed, performs its part in the system and passes off, with considerable, though varying, rapidity. It appears in the urine within from twenty to thirty minutes from the time of its administration, if the dose is a large one. It is eliminated mainly by the kidneys, in the urine, from one-third to one-half being excreted during the first six hours, after which it passes off more slowly; in some experiments only about two-thirds was excreted in forty-eight hours, while in others three-fourths had passed off in twelve hours; and traces are still to be found at the end of seventy-two hours. It is probable that some of the quinine is eliminated through channels other than the kidneys. In some fevers its excretion is said to be considerably retarded. Kerner found that some of the quinine was partly hydrated in the tissues and excreted as dihydroxyl-quinine, but Cushny says that if any such change occurs, it can affect only a very small proportion of the alkaloid, as over ninety percent of the whole amount ingested has been recovered from the urine.

*Strychnine* is absorbed rather slowly from the stomach, but much more rapidly from the rectum. When a poisonous dose has

been taken by the mouth, the symptoms usually come on in fifteen or twenty minutes, rarely after an hour, with great suddenness. If the dose is not large enough to prove fatal, the paralysis and other symptoms pass off after a time which usually varies from one to two days. In poisoning from strychnine it is the rule for the patient to recover if he survives more than three hours after the administration of the drug.

From these statements, the action of strychnine lasts from one to two days.

Lutze says nux vomica acts from ten to twelve days.

Strychnine is to some extent oxidized in the system, the remainder being eliminated by the urinary, salivary, and cutaneous channels. As its action is to contract the renal arteries, it hinders its own excretion by the kidneys, and hence may accumulate in the system if continuously administered even in small doses. It is therefore wise to suspend its use at intervals. Its elimination is more rapid in children than in old people.

## THE LOSS TO PHYSICIANS FROM HOSPITAL WORK

How the multiplication of hospitals affects the economic welfare of the physician. Read before the Strafford County and District Medical Society, Dover, N. H., October 31, 1907

By A. NOEL SMITH, M. D., Dover, New Hampshire

**H**OSPITALS are a blessing to the community; indeed, there is very little doubt but that they are a necessity, while they are becoming more and more indispensable. Of course the large cities are quite well supplied with them, but the smaller cities and towns are also getting to be well equipped. The race for supremacy seems to be well on between the Carnegie libraries and the cottage hospitals.

The necessity for hospitals has existed all through the centuries ever since disease has afflicted the human family. About the latter part of the fourth century the Persian empire was for a little while the only place where medicine could be cultivated and be protected by the laws. Certain Christians, called Nestorians, founded a school of medicine at Edessa, in Mesopotamia. Pupils came from all parts and studied practical medicine in a public hospital. This was probably the first institution for clinical instruction.

In most of our cities the hospitals have been founded and are maintained by private endowments. New York City supports

Bellevue and allied hospitals at an outlay of \$600,000 a year, which is about 15 cents per capita. Boston is the most notable of those cities which maintain a general hospital at public expense. Her City Hospital costs the citizens 79 cents per capita, an average yearly expense now of nearly \$500,000. The Carney Hospital has done a great work in its forty-three years of existence. It has no funds from which it derives an income, and no regular source of support. It is maintained in part by the fees of such persons as are able to pay, and from fairs and entertainments which are held from time to time for its benefit. About 2,500 persons were treated in the wards last year, about half of them paying the regular fee, while half of the remainder paid in part.

The burden of hospitals would rest more easily, of course, upon communities if founded and maintained by endowments; and the Massachusetts General Hospital has recently made appeals for endowments.

It is all right for the Brighams, the Morgans, the Rockefellers and the Wentworths to give of their abundance to found and

maintain hospitals, but I am firmly convinced that it is all wrong for the average physician to contribute so lavishly of his means, his time and his ability toward the success of these institutions.

*Where is the Physician's Reward?*

Men and women give of their abundance a single gift, therewith furnishing a hospital room or ward; and their names are engraved upon tablets to perpetuate the fact. And this is well. The physician or surgeon bestows his gifts of time and labor, which represent money, and does this perennially. However, no note is taken of it, except an occasional vote of thanks; and thanks never yet bought shoes for the babies or purchased horses, carriages or automobiles, which are the doctor's necessities. Our only tablet is the possible gratitude of the patient who recovers, and a threatened suit for malpractice if the patient dies.

The hospital avoids litigation by hiding behind the bulwark of a charitable institution; while the poor doctor, who with his own brain and hands performs the deed of charity, stands unshielded, with nothing to ward off the blow of a malpractice suit.

So much has come to pass as the result of medical and surgical progress, that doctors can no longer really afford their present generous attitude. To be sure, salaries have increased in value, and the estimation in which physicians are held has become higher than a century or two ago. But there is great danger of professional degeneration from increase in number, and from decrease in business. I know of no other profession or calling the members of which are constantly working to reduce their own income. But this reduction follows the prevention of disease, and physicians strive to prevent, not to induce or prolong, disease. Fifty years ago, if a case of scarlet fever developed in a city the size of our own, hundreds of cases would well follow. Now, when a single case shows its head, our watchfulness and quarantine prevent the second case.

Physicians, in a sense, receive a larger average income than formerly, but their ex-

penses are vastly more. As one well puts it: "Gratuities and honorariums used to be the rule when the doctor had to take hay and cordwood for his pay. Nowadays the doctor gets sixty days net, and two percent in ten. He has to pay for paved streets, good sewage, and filtered water, which deprives him of his business; while the farmer comes along and charges him twenty-five cents a pound for his bacon, and forty cents a dozen for his eggs." Another says: "The cost of living and every accessory to a doctor's successful practice have increased his expenses from 20 to 50 percent in the last ten years. He is the only man who is trying to legislate himself out of a living. He is the only man whose services can be had at every hour, day or night, without money and without price."

And now, lest a good-sized fee might by chance fall into a physician's pocket, a judge in a Missouri court has decided that a doctor cannot lawfully base his charge to any degree upon the patient's income. As *The Journal of the American Medical Association* well puts it: "The physician's services, it seems, are to have a trade valuation like a loaf of bread or a pound of sugar, so that their value to the patient is in no sense dependent on the latter's economic importance."

I wonder how the legal profession would relish having their prospective fees curtailed in this manner?

*The Abridgment of the Physician's Income  
a Vital Question*

And thus the abridgment of the doctor's income goes on, with here a little and there a good deal, so that it becomes easy to prophesy the disastrous termination.

Now, fellows, all this, and more, is true. It is unjust, it is wrong, and it ought to be righted.

"The time has come, the walrus said,  
To talk of many things;  
Of shoes and ships and sealing wax,  
And cabbages and kings."

There comes a proper time to speak of even the most trivial things of life, as manifested in the lines just quoted from "The Walrus and the Carpenter." How much

more truly does a time come to speak of the weightier matters! In my judgment, and in the judgment of many other physicians, it is high time to consider and to act upon the subject of some form of remuneration for the medical and surgical staffs of hospitals.

*The Medical Council* speaks right out in meeting, editorially, and says: "All hospital physicians and surgeons should be paid for their work. The hospital authorities pay all others who furnish services or supplies, why not the very men upon whose work the entire success of the institution rests?"

Now, then, let me observe right here that the physician, and he alone, is to blame because he is not paid. Certainly no blame can be attached to the hospital authorities if physicians are so shortsighted as not to ask for remuneration. The patients are surely blameless, as they give the hospital its price. Indeed, many think that the doctor receives his fee out of what they pay, and they have expressed great surprise when otherwise informed.

Let it be noted, in this connection, that the physician is struck hard in more ways than one. Firstly, he works for nothing. In the next place, when a hospital is supported, or partly so, by taxation, he pays his proportion of the tax. Then, again, should some properties have to be enhanced in value to keep the tax-rate low, the supposedly wealthy doctor is always one of the elect to have his property appreciated. Still, again, when the hospital-aid societies send out their circulars soliciting subscriptions, the word is passed all along the line: "Be sure that each physician receives one."

#### *The Public and the Physician*

The attitude of the public toward the medical profession has changed since early hospital days. The inmates then were of the poorer classes, and the better classes did not care for the attendance of a physician who also waited on the poor. They have overcome wonderfully their scruples in this generation. Well-to-do people have been known to dress in old clothes and to

disguise themselves in various ways, in order to secure free treatment in our city dispensaries. In the Boston Ear and Eye Infirmary, when Dr. Derby was on duty, men and women, amply able to pay, would pauperize themselves in their efforts to cheat him out of his regular fees. Thus we physicians are not only defrauding ourselves but we are partners to the crime of making our neighbors and friends dishonest.

I have been credibly informed that in our own hospital a man, whose income was about \$8.00 a day, had a hernia following appendectomy operated upon without fee; and another patient was freely, so far as physicians' fees were concerned, conducted through pneumonia, although he owned his own home and possessed a good bank account. A young man, commanding a good salary, informed the writer that he should certainly go to the hospital, if ill. For he rightly deemed himself a fool to pay out good money for night and day nurses, and for a physician at his home, when he could get everything so cheaply at the hospital, with no doctor to fee.

And we physicians, in whose hands the entire adjustment of this matter rests, stand foolishly helpless and witness our incomes thus depreciated.

#### *The Objects of the Hospital*

The object of the hospital, in the first instance, as cited above, was for the purpose of imparting clinical instruction to students, and this object obtains today in some of our larger cities, especially near medical schools. In these cases the hospital staffs doubtless are remunerated by receipt of pay for their lectures in the schools. But, even so, they probably would not be overpaid if hospital salaries were forthcoming also.

Another early object of the hospital was to care for the worthy poor. Now, county and city physicians are provided to do this, and they are paid for their services; not extravagant salaries, to be sure, but *something*, and I affirm in this connection that when the city or county poor are transferred

to the hospital for treatment, the city or county physician should attend upon them there. Manifestly they receive salaries to do this very thing, and the work should not be imposed upon the hospital staff, who, under the present regime, work for nothing.

The fundamental objects for the establishment of hospitals seem to have resolved themselves into the prevention of any income for the physician, or, rather, the doctors themselves have been too indifferent, diffident or modest to claim their own.

Even endowed institutions abuse our good nature, and there is no earthly or heavenly reason why they should not recompense the attending physicians or surgeons.

One of these endowed institutions I serve during one month of each year—and I wasn't even asked if I would be willing to do so. I was merely notified that September was the month assigned to me.

#### *The Benefits Derived by Physicians*

But do not physicians reap any material benefit or reward resultant upon their connection with hospitals? I very gladly admit that they may do so. For example, friends of the patients, or the patients themselves, may employ the staff physician in private life. We often hear this remark: "I wish you to treat me after I leave the hospital, should any further attendance be required." Yet, after all, admitting this to be so, there is no remuneration for the work which has already been actually done in the hospital. I am reminded of a friend who found fault with a grain dealer who urged payment for a bag of corn. "The idea," he said, "that he should make such a fuss about *one* bag of corn, when I have bought grain of him for years." The dealer evidently could not see how any amount of previous patronage had paid for that particular bag of corn.

Then, again, it is argued that doctors can well afford to give a portion of their time to hospitals, as they have various sources of income, which the nurses and the others connected with the hospital do not have. Very well, this is true so far as it goes; but

do grocers, butchers, milkmen and others who furnish supplies to the hospital deliver them free for three months of each year? They have other sources from which to derive an income, just as physicians have.

#### *Some Interesting Letters*

A prominent physician of Philadelphia, Dr. Thomas J. Mays, an author of prominence, has written to me upon this matter as follows:

PHILADELPHIA, Aug. 16, 1907.

MY DEAR DOCTOR SMITH: I am very glad to hear from you and pleased to know that you are keeping up your interest in live medical matters. I realize that the problem which you are dissecting now is a very important one in medical economics, if such a term is applicable.

There is no use for me to peddle the trite knowledge to you that the way many things are, and the way they have always been conducted in the medical world, is wholly irrational. The idea is absurd that because hospitals are eleemosynary institutions all the medical services connected with them should be eleemosynary, too. Such things could not and would not exist except through the grace of the profession itself.

The Pennsylvania Hospital of this city or the Massachusetts General of Boston are not a whit more or less eleemosynary institutions than are our state hospitals for the insane. Yet in the latter the compensation for medical services is good, while in the former the pay is reputation.

The inconsistency is really ludicrous right at home here. The Pennsylvania Hospital corporation is a large concern, and maintains two departments, one at Spruce and Eighth streets for the sick and infirm, and the other at Market and Forty-fifth streets for the insane. Both departments have large accommodations. In the former the medical services are delivered free, so far as I know, while in the latter all the medical officers are receiving a liberal salary.

My dear fellow, I am glad you have gone into this work. The ground is fallow, but if rightly worked, promises a rich harvest, and I can assure you of my best wishes. Very sincerely yours,

THOMAS J. MAYS.

Let me read a letter from a Boston physician, Dr. Richard C. Cabot, whose words and face are ever familiar to New Hampshire physicians:

BOSTON, Aug. 26, 1907.

DEAR DOCTOR: I believe that for the good of the patients, as well as for other reasons, all physicians connected with hospitals should be paid. I also believe that they should be appointed with a distinct written contract as regards time and the nature of their work as physicians, teachers and investigators, and with the distinct understanding that as soon as any obviously better man (young or old) appears, he shall be appointed instead.

Whether there are any hospital trustees wise enough and energetic enough to take the matter

up from this standpoint, I don't know. But I do think that medical opinion is swinging that way, and that the new hospital connected with the Rockefeller Medical Institute in New York is to be organized on these lines.

I am much interested in your interest, and hope to see it bear fruit. Yours sincerely,

R. C. CABOT.

Dr. C. S. Bacon of Chicago says:

"It is coming to be recognized that there is a pauperizing tendency in the bestowal of medical aid without requiring any equivalent. If patients in emergency cases, like surgical accidents, were the only ones thus helped, the temptation would not be so great; but when a pregnant woman learns that she can be confined free in a hospital, and have the best of professional care and skill, she will make no effort to accumulate means to pay properly for the services of a private physician."

A chairman of one of the sections of the American Medical Association writes me as follows:

September 12, 1907.

MY DEAR DR. SMITH: Having just returned from my vacation, I am now availing myself of the opportunity to answer your very interesting letter. It seems to me that you will have no difficulty in having every physician who has anything to do with hospital staffs to agree with you that we ought to be paid. My only feeling about this is that such a thing will never be accomplished. In the first place, hospitals do not have enough money to carry on their work as exemplified by the constant begging which is going on. Then, again, if we insist upon being paid the chances are that we will lose our positions, for, curious at it may seem, there are others who want our positions, men who are as well qualified and perhaps better than we. On the whole I agree with you. Only tell us how to do it. (Signature omitted.)

Dr. Joseph Collins of New York City, Professor of Diseases of the Nervous System in the New York Postgraduate School and Hospital, has very kindly sent me the following letter:

NEW YORK, Sept. 25, 1907.

DEAR DR. SMITH: I have just returned from abroad and find your letter of the 12th of August awaiting me. It seems pretty late to answer it, but I am going to do it just as if I had received it yesterday. Your first question, "Is there any reason why any hospital physicians and surgeons should not be paid for his work?" is a question which would be very difficult for me to answer conscientiously by either yes or no. Personally I am in favor of doing hospital work gratuitously, and my reasons for it are many. In the first place, hospital patients are patients who haven't any money; they are absolutely poor. In the second place, there are few hospitals in this country, or in any other country, so far as I know, that are sufficiently well endowed to pay a staff of attending physicians and take care of their poor as well. In the next place, there is a tradition in our profession for which I have great reverence, that we take care

of the poor, and do it gratuitously. Now, of course, all this applies to hospitals for the treatment of the poor, for I do not know of any hospitals where people of means are cared for by physicians gratuitously. [Dr. Collins evidently hasn't visited Dover. —Ed.] Of course, here in New York we have many hospitals, such as Roosevelt, St. Vincent's, Presbyterian, etc., to which patients go and pay for their room, pay for their medical services, and I cannot imagine anyone taking care of such persons without proper and adequate remuneration. With best regards, yours very sincerely,

JOSEPH COLLINS.

C. F. Hoover, M. D., of Cleveland, Ohio, Chairman of the Section of the Practice of Medicine, writes me as follows:

CLEVELAND, O., Aug. 20, 1907.

MY DEAR DOCTOR: It is my own practice not to receive any fees from patients who enter the open wards at Lakeside Hospital, even though they are sent there from my office. I think it is liable to create dissatisfaction or grounds of suspicion in the minds of other patients in the wards. I see no reason for changing this plan, though my surgical colleagues do collect fees from ward patients. Patients who are in private rooms I charge as I do any private patients. Very truly yours,

C. F. HOOVER.

A very prominent physician and noted author says:

Absence from town has prevented earlier answer to your query concerning paying hospital staffs. The only reason I know why they are not paid is that it is possible to get any number of physicians to serve for nothing. So long as the supply is so much in excess of the demand it is unlikely that the world will pay.

I have presented these letters *verbatim et literatim*, and I shall make no extended comment upon them, as they agree quite fully with my own position and opinion. We all expect to treat the really poor, but we object to being imposed upon by the really well-to-do. We cannot get blood from a turnip, but we can get sap from a live maple.

### *We Should Do Something*

Now, then, what is the remedy for this condition of affairs? The answer is easy: *Do something*. As I have talked with physicians in private concerning this subject, they have uttered a hearty amen. Why not act? But some one will say, "Other places do thus and so." What of it? We are not obliged to do as others do. Why not be pioneers here in Strafford County in this matter as in other things, not waiting

for the Rockefeller Institute to take the initiative?

Dover physicians were the first in the country, so far as is known, to express a readiness to fellowship upon the basis of being physicians only, and in 1881 subscribed to the following agreement:

We, the undersigned, assuming that entire liberty of thought and freedom of opinion are absolutely essential to real progress in the science and art of medicine:

Resolve, First, That we will in no way approve, sanction or hold allegiance to any organization, society or name, as homeopathy, allopathy, eclectic, and any other "pathy," or "ism" which by giving exceptional prominence and authority to any exclusive medical dogma or mode of practice tends to limit such freedom of thought or opinion.

Second, That we will recognize, professionally, only such honorable and well-accredited physicians as in their medical associations and conduct conform to the spirit of the foregoing resolution.

This agreement was signed by twenty physicians, one homeopath and one eclectic being among the number. The two latter also became members of the Dover and Strafford County and District Medical Societies. To our own Dr. Lathrop belongs the honor of the phraseology of the above resolution. Now the spirit of this agreement permeates every medical society throughout our country. Who can foretell the far-reaching effect of a Strafford County ripple set in motion concerning the subject of the paper.

Doubtless an amicably mutual adjustment of this matter could be made locally between

physicians and our several institutions. If the regular charges at the hospitals are not now large enough, sufficient should be added thereto to remunerate the physicians and surgeons. Such remuneration could take the form of a salary, or a graded schedule of tabulated fees could be established; while patients who are city or county charges should be attended by the city or county physician.

I am informed that in Lynn, Mass., at the contagious hospital for scarlet-fever and diphtheria, the attending physicians receive a salary for their work. It seems to me no greater hardship to minister to scarlet-fever and diphtheria patients than to a ward full of typhoid-fever cases.

The dispensary abuse is peculiar to large cities, and cannot well be brought within the scope of this paper. "The real trouble, however, with free hospital and dispensary service, now so popular in the cities, is, not that the poor are helped (as they ought to be), but that those who can really afford to pay are taken care of without charge."

I have purposely left the threadbare subject of charity out of the discussion, as enough of this, voluntary and otherwise, comes into the professional career of every physician; and, besides, some little charity should begin at home.

**A** STRONG life is like that of a ship of war which has its own place in the fleet and can share in its strength and discipline, but can also go forth alone in the solitude of the infinite sea. We ought to belong to society, to have our place in it and yet be capable of a complete individual existence outside of it.

—Hamerton.



# POSTLINGUAL ABSORPTION OF MEDICINE

A neglected route for the administration of remedies, the substances which may be given in this way to good advantage and some of the diseases in which the postlingual method may be used

By GEORGE W. DAVIS, M. D., Ottawa, Kansas

IN June, 1899, while passing an examination before the Kansas State Board of Pharmacy, I was compelled to taste many of the drugs set out for identification. Fluid extract of aconite was among the one hundred drugs set out. I did the "identification" all right, by tasting, but—the sequels! I had 'em all! Muscular weakness, dim sight, dilated pupil, shallow, irregular and labored breathing, slow weak pulse, cold surface, clammy sweat, great anxiety, numbness and tingling of extremities, lowered body temperature, abolished sensation, impaired reflexes and motility—everything but the embalmer. Escaped! From that time and experience I began to study the subject of the absorption of medicines from the mouth. I have found myself much interested and instructed, and have been amply repaid for all the effort it has cost me.

## *What the Textbooks Say*

Quoting from Potter's "Materia Medica, Pharmacy and Therapeutics," eighth edition, 1901, we find: "Medicines may be introduced into the circulation by various routes, including the mouth, the stomach, the rectum, the respiratory tract, the veins and arteries, the subcutaneous tissue and the integument.

"The mouth is the usual receptacle for medicines intended for the stomach, but may itself be employed for the introduction of minute quantities of powerful agents. A drop of the tincture of aconite placed on the tongue is quickly absorbed and soon manifests itself by the symptoms. Many of the small tablets for hypodermic administration, if placed under the tongue, are readily conveyed into the system, and used in this way form a very convenient means of medication with alkaloids and other active principles."

Butler in his "Materia Medica and Therapeutics" (Fourth edition, 1902) scarcely hints at this very useful method of administering medicines, brushing the whole subject aside with the following allusion: "Remedies may be applied externally to the skin or internally to the mucous membranes, either as a local application or to bring about a systemic action."

Stevens in his "Materia Medica and Therapeutics" declares more clearly the utility of postlingual absorption, in the following: "Absorption may take place from any part of the alimentary canal. Powerful remedies, as nitroglycerin and aconite, are readily absorbed from the tongue."

A. M. Wilson, A. M., M. D., whom the medical students dubbed "Dosimetric Wilson," professor of Materia Medica and Therapeutics of the U. M. C., used frequently to tell his class to exhibit their remedies wherever and whenever possible in the form of alkaloids and urge their patients to chew the granules and hold the substance on the back of the tongues, that they might get immediate and certain results.

## *The Knowledge Born of Emergencies*

I practised medicine in a small village among country people for seven years and there, amid all the varying emergencies that arose, I learned to lay my hands on such therapeutic armamentaria as were of certain definite composition and strength and such as were always reliable and whose physiological action and therapeutic effects I could trust when long dark muddy miles had intervened between my sick patient and myself.

Further, I learned to choose what medicine would soonest give relief in the smallest quantity and to administer such medicines

in a way to get from it its best, quickest and safest results.

If I found my patient "tied up in a knot," suffering the horrible pangs of an acute gastralgia, I flashed the hypodermic needle and some trusty remedy.

In calling your attention to the postlingual method of application of medicines, I do not decry the use of the hypodermic method. That's tried, true, trustworthy and certain and should always be available. But I would urge you to begin now (if you have not already) to study, experiment with and use the postlingual method until you can rely as certainly upon this method as upon hypodermics.

#### *Our Postlingual Armamentarium*

Fortunately for the student experimenter and practitioner of this mode of drug administration, we have now at hand nearly every drug, every medicine, necessary to treat, relieve and cure disease in convenient form and dosage. Alkaloids, resinoids, glucosides, acids, salts of various metals, and various chemical combinations are adapted to postlingual administration—such remedies as aloin, digitalin, strychnine, pilocarpine, glonoin, gelseminine, atropine, aconitine, cactin, etc. The adjuvant of suggestive therapeutics involved in the administration of medicines by postlingual absorption is wholesome. The hypodermic syringe—the only possible rival of this method—has its drawbacks, in its unhandiness, danger of infection and its untoward suggestion.

I remember one hot soggy Fourth of July night, when I was bending over a patient who was suffering from acute *mania a potu*, just administering a hypodermic of apomorphine, I heard one neighbor outside the window ask another, "How is he?"

"Oh, he's a goner," was the reply, "I see Doc punchin' medisn in his arm."

On another occasion I essayed to administer a sedative to a very large Amazon who was nearly crazed by pain. She saw me advancing with the needle prepared, and let out a series of frenzied yells. Her husband, her cousin and her uncle seized her. I passed the syringe to the undergraduate who was with

me—I had a boil on my neck and was glad of it for once! A fierce struggle ensued, but no hypodermic for her! I persuaded her to chew some tablets (1-2 grain of morphine and 1-2 grain of emetine) and in fifteen minutes she was free from pain and almost everything else that was loose.

She afterward explained to me that "Aunt Sarah would ha' ben liven' yet ef they didn't a stuck her on her arms with them hyperdermerings."

#### *Diseases Where the Postlingual Route May be Tried*

Without enumerating some of the class of cases to which the postlingual absorption method of administration is adapted I would feel that my colleagues might justly accuse me of having "gone to seed" on the back of the tongue—as it were. Here are a few:

Afterpains: Hyoscyamine gr. 1-250 (or more) every hour. If extreme, then hyoscine, morphine and cactin compound, half a tablet every six hours, held long on the back of the tongue.

Pertussis: Trional, hyoscyamine.

Vesical colic: Codeine, gr. 1-2, or heroin, gr. 1-50, on the tongue.

Angina pectoris: Glonoin, gr. 1-250, on the tongue—better follow with one hyoscine, morphine and cactin by the same method. If very extreme, better swing in the hypodermic with 1-4 grain morphine, 1-100 grain atropine first.

Uterine hemorrhages: Ergotin, 2 grains, postlingually. Don't forget the curet. Don't swallow the "tooken cold" or the "fell-off-the-door-step" story.

Asthma: Hyoscine, morphine and cactin half tablet followed by other half at end of one hour. The most efficient treatment for acute attack. Aspidospermine may do much good given by postlingual absorption every fifteen minutes during first three hours.

Uterine colic: Hypodermic of water with one tablet of hyoscine, morphine and cactin on back of the tongue.

Cancer: When incurable and inoperable, hyoscine, morphine and cactin, twelve hours apart—postlingual absorption. I have a

patient now aged sixty-six with a large incurable cancer who uses one hyoscine, morphine and cactin every eleven hours and gets complete surcease from pain. Walks about very comfortably.

Neuralgia, trifacial: Aconitine, gr. 1-134 every fifteen minutes dissolved on the back of tongue, until tingling sensation is quite acute.

Coma: Croton oil wiped on back of tongue. Caffeine hypodermically.

Spasms in infants: Emetine or apomorphine, in mouth. If high temperature, give also aconitine the same way. Children are not good patients for postlingual absorption except when they can't help it, i. e., when comatose.

Dysmenorrhea: Hyoscine, morphine and cactin, very small doses on back of tongue until flow is well established. I don't believe hyoscine, morphine and cactin will form any drug-habit. [On that point it is well to be careful.—ED.]

Pleurisy: I have used aconitine and heroin on the tongue and kept patient free from suffering while heat, collodion, constrictures, potassium iodide cleared away the wreck.

In earache postlingual administration of morphine, small dose, is an ideal relief.

Pericarditis: I use bryonin, gr. 1-67, giving it every thirty minutes on the back of the tongue until the patient is relieved of the acute symptoms.

Gastralgia: If very acute, a hypodermic of about 1-8 grain morphine followed or accompanied by one-half tablet hyoscine, morphine and cactin.

Palpitation, bad enough to call for my services, I use cactin, gr. 1-134, alternating every fifteen minutes with sparteine, gr. 1-6, on back of tongue, until the distress is ameliorated.

Cerebral hemorrhage: Croton oil on tongue.

Mumps: I gave small doses of pilocarpine on back of tongue, 1-67 grain, and repeated not oftener than every two hours; this lessens pain, swelling and danger of metastasis.

In cases of cerebral meningitis and in cerebrospinal meningeal affections, hyoscine, morphine and cactin on back of tongue, one whole tablet, or half tablets every two, four, six or eight hours as needed, keeping patient in cold room. [Better use half tablets, giving to effect only.—ED.] Rectal feeding, etc.

Lastly, in labor, I believe hyoscine, morphine and cactin is the greatest blessing that ever came to motherhood. I need not tell you how to use it. This journal is full of it, and after having used it I endorse all that is said in its favor by the "dosimetric cranks," but I found my place to crow—for certainly postlingual absorption is the ideal method for administering this hyoscine combination.

## THE DOCTOR'S MEDICAL BOOKS AND JOURNALS

Being another chapter in the series, "Concerning the Doctor Himself." What the physician should read, how to preserve the things of value and the kind of books he should buy

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana

Professor of the Principles of Surgery, College of Medicine of Indiana University, Indianapolis, Indiana

**W**HAT a fine library has Doctor So and So!" "What a lot of junk fills up his book cases" would more often express the truth.

Probably more money is wasted in medical literature than in any other form of

printed matter. Probably a smaller percentage of what is printed is read by those for whom it is intended than of any other form of communications. Why this is, and why it should be, are two things that can be explained most easily in the old saying:

"Familiarity breeds contempt." There hardly can be any other explanation.

Every doctor's desk is the recipient of medical literature of various kinds. In nearly every mail medical journals, good, bad and indifferent, are sent to him as samples, as complimentary numbers or for the judicious exploitation of some new drug or chemical compound. No human mind could comprehend the contents of the literature that is thus spread out for the doctor's daily attention. On the other hand, it would be unwise and a waste of time for any doctor to digest the contents of even specialized articles, for much that he would have to go over would be reviews of uncertain and undated textbook material. What the student and the busy man desires is an article which he takes the time to read is something new, something short and to the point, or comprehensive and limited to facts.

Many authors write articles for the busy practitioner that are of value only to the student and the inexperienced. Others write of theoretical possibilities that are of no interest to anyone outside those in closest touch with research laboratories. Others take pleasure in enumerating case histories of patients who survive their treatments, forgetting to mention the failures, which teach us most.

#### *Unavailable Medical Literature*

Contributions to medical literature, like legal decisions, are becoming so numerous that it is beginning to appear that we have obtained possession and knowledge of almost everything but the use of common sense. In nearly every office are to be found bound volumes of old medical journals which have never been opened since they were received from the binder. Were their owner to take them up he would have to acknowledge that a memorandum book would contain all that he might have found valuable in them. Of course to any one with the means, the time and the inclination for wanderings in ancient history, such volumes are useful, and that someone should preserve them is a matter of necessity. This however is the function of our public libraries, but an unprofitable

waste of time, space and money for the average doctor. On the other hand, in other doctor's offices we are accustomed to see piled up in the back room volume after volume of different medical journals, useless and waiting the arrival of the inevitable ragman. What things of value they contain are buried in the heap of printed matter and might require days and weeks to hunt it out, even with the knowledge of volume and date that is to be found in an index rerum.

How then are we to dispose of our journals so that we may make available those things which we find of value in our journal grazings, and keep from being overloaded with the mass of information that is thrust upon us.

The first requisite is a prodigious wastebasket. The second is a knowledge of what we want. The third is an ability to use the scissors. The fourth is a set of boxes, envelopes or letter files.

#### *How to Classify and Preserve Clippings*

Every physician interests himself in some line of work. Internal medicine, surgery, gynecology, genitourinary diseases, etc. The classification of no two men's literature would be alike. For the general practitioner, a dozen boxes would be more than sufficient, into which the knowledge given in a hundred volumes of journals could be contained. His classification might be, first, continued fevers; second, the exanthemata; third, nervous diseases; fourth, stomach and bowel diseases; fifth, other abdominal conditions; sixth, diseases of women; seventh, diseases of bones, joints, and muscles; eighth, puerperal conditions; ninth, genitourinary and rectal diseases; tenth, special conditions of the throat, nose and skin; eleventh, tuberculosis; twelfth, therapeutics other than medicinal.

Each of these subjects can be subdivided into many parts, according to a man's inclination and the demands of his work. The surgeon will have a box for each of the organs which he explores. The specialist would have a box for each of the diseases which he is called upon to treat. Sectional-book-case manufacturers now make filing

cases to fit the regular book sections, so that these devices allow of no deviation or irregularity in even the particular man's library.

Now a dozen articles may come out in as many different journals on one particular subject. If one of the articles is comprehensive of all that is written in the other eleven, what is the use of saving the other eleven? We receive our journals and they are neatly piled on the corner of our desk or book case each morning. We glance at the advertisements, finger the leaves, see something good, and lay it aside for future reference, when we may need it. But when we do need it, where or when did we see it, and how or where are we to find it? We have our waste basket, our boxes, our scissors, a paper of pins and we are ready to locate "What we want, where we want, when we want it."

#### *Tearing, Saving, Filing and Classifying*

Firstly, the front and back advertisements are torn from all magazines worthy of keeping or reviewing, as soon as they are received. This saves about two-thirds of the space they usually occupy on our shelves, as we commonly lay them back. Next, at our leisure, we look through the journal and tear out any article that promises to offer anything new, unusual or more practical than what we already possess. It is surprising how little we will tear out. These clippings, accumulating daily in a general box, can be sorted at our leisure, according to our several desires. After our accumulation of clippings has covered several years, every time we look into a box to obtain special information on any subject, we will find dead material which we can throw away, for very frequently a new and exhaustive article, by one man, will have everything of importance that is contained in the other articles we possess on that subject.

Medical journals are indispensable. They are the necessary means for the rapid dissemination of a knowledge of the important discoveries in our work. They furnish an outlet for our exuberant energies and a summary of the results of many men's work along single lines, permits us to form opin-

ions as to the justifiability of method and the usefulness of the means we use in our combats with disease.

#### *Textbooks Behind the Times*

On an average, medical knowledge is printed in medical journals from two to five years in advance of its appearance in medical textbooks, hence the average working library composed of textbooks alone is from two to five years behind times. This offers the medical publishers the opportunity which they have been overdoing, in putting on the market medical textbooks that have one or two new features to commend them to the book buyer. These new features are issued and shown in the prospectuses, and according to the versatility of the agent, the doctor pays a good round sum for the knowledge which is buried among his medical journals but which he is unable to find.

Publishers are vying with one another in the elaboration of their books with pictures taken from life, which next to our clinical courses, give us the greatest assistance. On the other hand, every agent who comes to our offices brings with him a lot of many-volumed "Systems" and seeks to make us buy something which we regret when it is placed on our shelves. Many physicians are profiting by their past experience and are refusing to accept any book or place an order for any unless it is sent on approval.

Just why the doctor should have to buy his textbooks "sight unseen," has been discussed many times. One factor undoubtedly is that the average doctor would buy few or no books without the persuasive influence of the loquacious book agent.

#### *Expenditure for the Library*

The working library of an up-to-date and active man requires the expenditure of from five to ten dollars a month. Twenty-five dollars a year ought to provide a half dozen good medical journals, always including the journal published in his immediate neighborhood and supplying home news and information concerning those whom he may call in consultation. The additions to one's library one should make not

with a desire to show quantity but quality. One book purchased every three months whose contents are thoroughly digested gives one a postgraduate course. Special monographs can be purchased, exhaustively considering the many phases of nearly every disease and perusal of one of them opens our eyes to the magnitude of our responsibility. Kelly, on "Appendicitis;" Treves on "Intestinal Obstruction;" Webster on "Ectopic Pregnancy;" Kelynak on "Renal Growths;" Graham on "Hydatid Disease;" Keen on "Surgical Complications of Typhoid Fever," and Moynihan on "Gallstones" are prominent examples.

#### *Two Classes of General Interest*

Last but not least are mentioned two classes of medical books that are of universal sale. One contains a series of articles prepared by our master minds, covering special subjects that ought to be of interest to everyone. Like all of the many so-called "Systems" though, these volumes contain much that is not of interest and rarely contain more than one or two articles that are read by the purchaser. The internist does not care for the "Diagnosis and Treatment of Hemorrhoids." The surgeon does not

care for the "Prophylactic and Curative Treatment of Influenza." The gynecologist will not read fifty pages devoted to "Milk Bacteria and Cholera Infantum;" while the ophthalmologist is required to overlook three hundred pages devoted to the above in order to get ten pages treating of "Paralysis of the Ocular Muscles."

To obviate the above, our medical journals have established elaborate digests of all current medical literature; but more valuable than any are the series of medical Year Books in which separate volumes are devoted to a complete review of all that has been published the previous year in particular lines of work. Surgery is treated in one volume; Obstetrics and Gynecology are important enough to be considered in separate books. The internist has so great a field that two volumes are devoted to his work. In all, ten volumes are sufficiently comprehensive to give a man an entire review of all the theory and practice that the previous year added to our knowledge of our science and our art.

"By their works ye shall know them," and the student must take advantage of all that can profit him. How to do this with the least labor is learned only by experience.

## A FEW HYPODERMATIC PURGATIVES

The advantages of a satisfactory subcutaneous purgative, if such an one can be found, and some of the remedies which have been used to produce purgation in this way

By E. S. McKEE, M. D., Cincinnati, Ohio

A SATISFACTORY subcutaneous purgative is a want seriously felt in medicine. For example in such conditions as inflammation of the stomach when that organ is so sensitive that it will not retain a purgative, in apoplexy, coma and unconsciousness, obstruction to the esophagus or refusal of the patient to take medicine, and after certain operations, a drug which could be administered subcutaneously, satisfactorily, would be of the greatest advan-

tage. Many pharmacologists and manufacturing chemists have been and are studying this subject and experimenting with it, but so far with varied success.

#### *Podophyllin a Hypodermic Cathartic*

Podophyllin may be taken as an example of a group of vegetable cathartics, solutions of which introduced either under the skin or intravenously occasion increased peristalsis. Podwissotzky has found two active principles

in podophyllin: a neutral crystalline substance known as podophyllotoxin ( $C_{23}H_{24}O_9$ ), and picropodophyllin. The official resin of podophyllin consists of two resins: one soluble in both ether and alcohol, the other in alcohol alone. Squibb describes podophyllotoxin as a yellowish white, very bitter powder, soluble in alcohol, partially soluble in ether and chloroform; a drastic cathartic. Its dose, by the mouth, is 1-12 to 1-8 grain (0.005 to 0.008 Gm.) in alcoholic solution.

Podophyllotoxin injected under the skin of an animal or man causes purgation in from twenty minutes to one hour. The injection of 1-5 grain under the skin of a terrier produced seven liquid stools within three hours. If podophyllotoxin is injected under the skin of a cat and the cat killed a few hours later, the gut from near the stomach to the large intestine shows marked congestion. If the mucous membrane and contents of this portion be extracted with alcohol a solution is obtained which possesses the properties of podophyllotoxin.

The local irritation of this drug, when used subcutaneously, is such that it can not be used indiscriminately. This objection holds with solutions of the other vegetable cathartics which act when used hypodermically, such as aloes, senna and colocynth.

Mackenzie and Dixon (*Edinburgh Medical Journal*, November, 1898) report a number of experiments with podophyllotoxin hypodermically in cats, dogs, and men resulting in copious evacuations in about one-half hour.

#### *Subcutaneous Use of Magnesium Sulphate*

Magnesium sulphate injected subcutaneously in an adult person will cause purgation. It is needless to say that this effect is produced in an entirely different way from that by the mouth. Magnesium sulphate administered by the mouth causes no increase in peristalsis but acts by the increased amount of fluid which it attracts into the intestines. The hypodermic injection causes increased peristalsis. The injections are generally made in the arm and in doses of 1 and 1-2 grains of a 2- or 3-percent solution. This result occurred only in a majority of the

cases. A further objection is its supposed toxicity, which might occur if it is directly injected into the blood.

Digitalis, pilocarpine, physostigmine and muscarine produce this effect when administered hypodermically in sufficient doses but the ill effects which accompany them prevent their use in this way, for this purpose. Colchicine has been suggested and tried, but has been cast aside on account of its simultaneous action on the stomach and its insidious and late depressing effect on the medulla.

Salicylate of eserine has been studied by Craig of Boston and Vineberg of the Mt. Sinai Hospital of New York. They used it in milligram-doses hypodermically every three hours, producing catharsis in 50 to 75 percent of cases. It acts on the muscular coat of the intestine, like ergot on the muscles of the uterus. It does not cause pouring out of fluids into the intestine. It will not act if the muscles of the intestines are so distended with gas that they are paralyzed.

Atropine has been known to produce peristalsis in some cases when used hypodermically. It is not likely to come into favor because of its action on the secretory glands.

Of the morphine group morphine injected in large doses in man induces purgation and vomiting in some cases. Apomorphine is a powerful emetic but has little effect on the intestine. Codeine produces purging in animals more readily than morphine, while apocodeine brings on purging without any vomiting.

#### *Apocodeine Hydrochloride*

Guinard showed first that vomiting did not follow the use of this substance as in the case of apomorphine. Murrell experimented with it and discovered that it was of value as an expectorant. Roviart used it subcutaneously in patients suffering from constipation and reported in its favor. Two cubic centimeters of a 1-percent solution of apocodeine hydrochloride (about 3-8 grain) injected under the skin of a man produced one or two soft motions in an hour. There is no feeling of nausea and a slight irritation

at the seat of the injection passes off in a short time.

Experiments on animals go to show that apocodeine acts diametrically opposite to nicotine, that is, it causes vasomotor dilation, fall of blood pressure, increased peristaltic movements. The absence of effect on the stomach by apocodeine may be explained by the fact that the sympathetic gives few if any fibers to the stomach. It can not act centrally on the brain because increased peristalsis can still be seen when the vagi and cord are cut, nor can it act on the extreme periphery, for when applied directly to the living intestine all movements cease. On injecting moderate quantities of this remedy into anesthetized cats and dogs or rabbits it is easy to show that certain ganglionic cells are paralyzed. After the injection of apocodeine stimulation of the chorda tympani gives no increased submaxillary secretion, although the secretory neurons are active, because the exhibition of pilocarpine still gives rise to a greatly augmented secretion.

We infer from this that the ganglionic cells are paralyzed on the chorda tympani.

Experiments with apocodeine hypodermically have been made on an extensive scale by Prof. Combemale, of the University of Lille. In his hands the injection of 30 mm. of a 1-percent solution of apocodeine hydrochloride was followed in almost every instance within half an hour by one or two loose stools. The only bad effect he found was some irritation of the skin at the site of the injection, which was avoided by injecting the drug deeply into the muscular tissue.

Apocodeine lowers blood pressure, produces vasodilation, and increases peristaltic movement. This all occurs probably from its sedative action on the sympathetic inhibitory ganglia. It does not produce vomiting or other ill effects and merits an extensive trial as a hypodermic purgative. A one- or two-percent solution of the hydrochloride of apocodeine should be used, which solution should be filtered and neutral. Two or three Cc. should be injected for a dose.

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## BE BRAVE—AND LIVE

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The beautiful little poem which follows is by a member of the "Clinic Family", whose innate and really unpardonable modesty impells him to write "incog", though he did finally consent to sign "Stamats". Perhaps you know him. If not, you should—for he is a glorious fellow, one of the elect!

The poem speaks for itself, but it is an inspiration to high ideals which should, and we believe will, find a response in the hearts of all of us.

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Be brave, my soul, for cowardice is weakness;  
Be strong, for weakness is disgrace;  
Care not for clouds, for sunlight is eternal;  
The one who falters never wins a race.

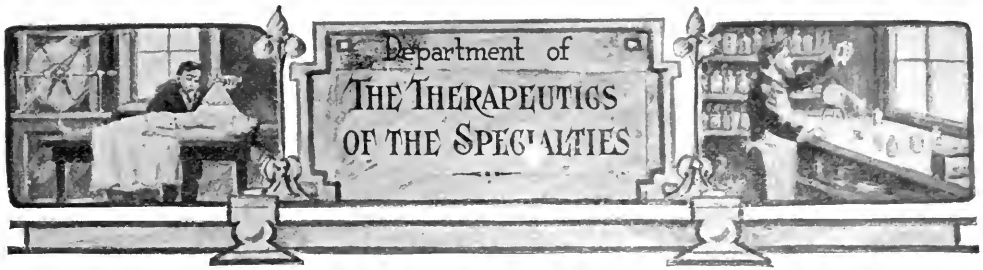
If there are sorrows, live not in their shadows  
But seek the sunshine of new joys;  
Grieve not o'er wrongs, for grieving cannot right  
them,  
And mourning only cheerfulness alloys.

Oft many tons of rock pass through the crusher  
Ere they produce an ounce of gold;  
A thousand shells are broken to discover  
One hidden pearl of perfect mould.

Faint not nor fall away by the wayside  
Press on, the mighty current stem;  
For Life's rewards, however you may doubt  
them,  
Surpass in worth or gold or gem.

Talk not of death, there is no death but failure  
(Who dares to fail, deserves to die)  
But fill your life up to the fullest measure:  
Let "LIVE" be your eternal battle-cry.





## THE TONSIL FROM THE MODERN VIEWPOINT

The attitude of the physician toward the tonsil and its diseases, with the method of examination and the operative and other methods of treatment

By GEORGE L. RICHARDS, M. D., Fall River, Massachusetts

Associate Editor of the *Annals of Otolaryngology and Rhinology*; Otolaryngologist to the Union and St. Anne's Hospitals.

RECENT investigations by Goodale and Wood have shown conclusively, first that absorption can take place through the tonsils by means of the mucous membrane of its crypts and secondly that the tonsils have direct connection with and drain through the superficial and deep cervical lymphatics. The ordinary and well-recognized clinical phenomena of an acute tonsillitis are in perfect accord with this anatomical fact, the constitutional symptoms and general disturbance of which are frequently out of all proportion to what can be seen on inspection of the tonsils themselves. In quinsy we have first the symptomatology of an acute tonsillitis and then, through closure of the crypt-outlets with the prevention of external drainage, the retention of a purulent product with the final formation of an abscess. This abscess is not usually in the gland itself, which is too resistant, but in the cellular tissue of the triangle formed by the union of the palatoglossus and palatopharyngeus muscles above and the connective-tissue stroma between the tonsil and the muscular structures external to it.

Careful study of the tonsils in many cases of tubercular cervical glands have shown them to be diseased, even though there was no apparent enlargement, while acute articular rheumatism is now regarded as being in

a large number of cases, perhaps the majority, a sequel to diseased tonsils or following some form of tonsillar inflammation.

### *The Attitude of the Physician to the Tonsil*

Assuming these facts to be true, what shall be the attitude of the physician to the tonsil? Shall he, as a preventive measure, make war upon every tonsil? Assuredly no, but in the presence of any symptoms, acute or chronic, which suggest tonsillar trouble, let him carefully examine the tonsil and ascertain whether it is diseased or not. By a diseased tonsil we mean one that is a hindrance to the proper performance of the function of the body. It may or may not be hypertrophied. Some of the tonsils which most urgently demand removal are the small submerged, almost invisible, tonsils. The diseased tonsil, then, may be hypertrophied and a mechanical obstacle in the throat, it may have diseased crypts secreting purulent matter, it may be the subject of repeated attacks of inflammation, or it may be associated with cervical adenitis, tuberculosis or rheumatism.

### *Method of Examination*

The patient should sit in front of the doctor, facing a good white daylight, or one may use a forehead mirror with a good

source of illumination: a tongue depressor, probe, and some form of stout hook with which to retract the anterior pillars, are required. Depress the tongue and note the relation of the tonsils to the anterior pillars; whether as the patient gags they roll toward each other so as to touch, even though at first they seemed quite a distance apart; whether they are apparently small, yet the anterior pillar looks as though it had a small marble concealed behind it which becomes visible as a good-sized tonsil when, with the hook, the pillar is drawn backward. Take a light curet and probe and see whether the crypts lead deeply and contain white, cheesy matter easily squeezed out. Finally, feel with the finger over the pillar so as to note how much of the tonsil is posterior to the pillar. Grasp the tonsil with hook and see if it can be drawn out into the throat. Much information as to its condition can be ascertained in this way, whether tough and fibrous or soft and spongy.

Having ascertained its size, relationships and condition, what shall we do with it? If it is large mechanically or diseased, remove it. If it is associated with attacks of rheumatism, tonsillitis or the presence of enlarged glands, remove it as a possible source of infection, better gotten rid of. If it is a small gland, apparently healthy, giving no general or constitutional symptoms, let it alone. I say remove it, i. e., provided the consent of the patient can be obtained. If this can not be obtained, as will sometimes be the case, endeavor by local treatment, such as stimulation and cleansing measures with the use of local caustics, as silver nitrate in varying proportions (3 to 20 percent), chromic acid, trichloroacetic acid and the like, to clean out the crypts and render the gland as harmless as possible.

#### *Which Operation Shall We Use?*

If removal is decided upon, shall it be tonsillotomy, the slicing off of a piece of the gland, or tonsillectomy with its thorough enucleation? Until a comparatively short time it was taught and practised by most laryngologists, myself included, that the removal of such portion of the gland as pro-

jected beyond the anterior and posterior pillars was all that was required. Many of us have had the opportunity to reexamine some of our cases after the lapse of years and to note that such an operation had failed, in not a few cases, to do for the patient all that we had hoped such an operation would do. There were the so-called recurrences, really hypertrophies of a gland which had had a slice taken off from it (for I do not believe that a tonsil once really removed ever grows again), the attacks of tonsillitis and even of peritonsillar abscess, so that when we removed, as we supposed, a tonsil, we were unwilling to promise that there would never be an attack of tonsillitis again. In many cases, perhaps most, the incomplete operation proved a success, yet not infrequently it failed to do all that had been hoped for it.

All of the instruments for tonsil removal, such as the Mackenzie guillotine and the Fahnstock and Matthieu tonsillotomes, were based on the principle of removing some but not all of the gland. Gradually the study of the absorptive action and drainage relationship of the tonsil have led us to the belief that tonsillar removal, enucleation, with the leaving of the pillars freely movable instead of fast to a diseased stump, was what was wanted.

It has been said and sometimes, perhaps, with reason, that the voice was injured by removal of the tonsil. I think where this occurred that it was due to the adhesion which resulted from the attachment of the tonsillar stump to the pillars.

Tonsillar hemorrhage had always, and rightly so, been a bugbear to the operation. Mostly this was due to the fact that the bloodvessel injured was one of the pillar-vessels or else that the vessels, being in the tough fibrous stump, could not retract. Robertson pointed out, when he introduced his tonsillar scissors, that when hemorrhage took place the thing to do was to hunt for the particle of tonsil which had been left, which being removed, the hemorrhage would cease. The blood-supply of the tonsillar capsule consists of a number of relatively small vessels coursing parallel to the long axis

of the body, while the vessels in the gland are relatively larger and course at right angles.

Where the tonsil is completely removed its external surface will be found to consist of a thin but tough membranous capsule without holes to which many crypts lead but none pierce. Such a tonsil examined with a probe, will allow the probe to go to the capsular membrane but not through it. The cavity from which the tonsil came will feel soft to the finger and free from any gland-tissue and the pillars will be widely separated,

coming nearer as the cavity fills up and grows smaller, but not becoming adherent. Such a tonsil-operation leaves the throat sorer, takes longer to heal, a week to ten days, is more difficult to do (no skill is required for a tonsillotomy with a fork tonsillotome), but is sure in its ultimate results and requires no subsequent operation nor is there any fear of future attacks of tonsillitis or peritonsillar abscess.

The detailed technic for the performance of tonsillectomy will be given in a future paper.

## A SUBSTITUTE FOR OBSTETRIC FORCEPS

Where "mother wit" found a means of securing immediate delivery in a "forceps case." An old but useful expedient which is a "boon to the parturient woman and a valuable resort to the doctor"

By J. DOBSON, M. D., Riverton, Connecticut

**M**EMBERS of the profession are sometimes unexpectedly placed in embarrassing positions where they have to exercise their wits and resourcefulness on scant notice. The writer was called into an obstetric case while on his rounds in the country, and not expecting anything in this line of practice, had not at hand his obstetrical outfit. The lady was in a discouraged state of mind and her friends were very anxious, bordering on alarm, at the tedious character of the labor, as the case had been lingering for seventy-two hours in the hands of an old "midwife" who was innocent of all technical knowledge. I was convinced that unless the lady had some assistance, trouble would result from sheer exhaustion. It was decidedly what we consider a "forceps case," but as I had no forceps at hand I forthwith resorted to a procedure often practised in the "old country," and one that might with advantage be more generally adopted here.

The parturient lady was seated on two chairs placed close together in front but allowing the backs to be separated sufficiently to permit the passage of the child and afford the operator room to work. A quilt

spread over the seats arranged so as to sag well down between the chairs. The carpet was protected by folded "comfortables" being spread on it and I placed myself behind the separated chairs to support the perineum and manipulate the gravid uterus through abdominal walls, meanwhile giving the patient all the encouragement—moral and physical support, and assurance that she would very quickly be "all right"—that I could.

The result was as I anticipated, for in a few minutes she had a pain and the uterus was felt to contract with much greater vigor than when the patient lay prone in bed, and the labor was completed without the slightest hitch, to the great delight of the patient and friends, who, by the way, were not a little amazed at the successful procedure.

I merely give this outline of the case for the benefit of younger obstetricians who may not be aware of this procedure, which is a boon to the parturient woman and a valuable resort to the doctor in many cases.

I have had frequent need to adopt the plan during the last thirty years, and it has never failed me. The one great essential is to support the perineum thoroughly until the head is born.

# LUES: THE MOST PROTEAN OF DISEASES

Another of the "Informal Chats with the General Practitioner," in this number discussing the constitutional treatment of syphilis, with and without mercury

By WILLIAM J. ROBINSON, M. D., New York City

Editor of The Critic and Guide, Therapeutic Medicine, Altruria and The American Journal of Urology

THE constitutional treatment of the most protean of all diseases, syphilis, can be summarized in one word: *Hydrargyrum*. But right here we must make a stop. Among American physicians who make a *specialty* of treating syphilis there is not one who is opposed to the use of mercury. But there are still a few—a very few—anti-mercurialists left in Europe (Schweninger, Boeck), and in this country the number of *general* practitioners who decry the use of mercury in syphilis is quite respectable. Simply pooch-pooching their opinions and ending the matter by calling them ignoramuses will not do. A frank discussion of this extremely important subject will be more to the purpose.

## *The Aversion to Mercury*

Whence arose this deep-seated aversion to the mercury in the minds of some physicians and laymen? Why has no other drug such active zealous opponents?

It is sufficient to read a description of the method of treatment of syphilis by mercury in the seventeenth and eighteenth centuries to comprehend at once the etiology of the intense antagonism to the drug. People were so stuffed with mercury that the saliva ran from their mouths by the pint and quart, their teeth dropped out, they became exhausted with bloody dysentery, were attacked with paralyzes, etc., etc. No wonder that many began to consider the cure worse than the disease. At that time the antagonism to the use of mercury was perfectly justified and it is from that period that the prejudice against the drug still survives. Are patients still being injured by the improper administration of mercury? Undoubtedly, yes. But under careful, discriminating and individ-

ualized supervision, we can honestly and conscientiously answer: No.

Is mercury a specific in syphilis? Besides quinine in malaria, it is the best type of specific that we possess. When we see a macular eruption, a corona veneris, numerous papular and pustular syphilides which existed for months disappear within a few days under the administration of mercury (and we see the same thing thousands and thousands of times) we cannot help considering the drug a specific. When we see a syphilitic man begetting and a woman bearing one syphilitic child after another (or losing them by miscarriages) and then when we see an apparently healthy child born at full term after a thorough mercurial course administered to one or both parents—when we see thousands of such cases, we cannot help calling mercury a specific.

Now we have still better proofs—no, not better, but more direct, more unimpeachable. The *spirochaeta pallida* bears a strong relationship to syphilis. In fact we are justified at this date in stating that it is the direct causative agent in syphilis. Examine a patient and note the approximate number of spirochetæ. Administer mercury for several days and the number of spirochetæ falls considerably. But Metchnikoff's latest experiments offer us a still stronger proof: On inoculating monkeys with syphilitic virus and rubbing in a calomel ointment soon after, syphilis fails to develop, while in those inoculated monkeys in which the ointment has not been used syphilis does develop. What stronger proof of the specificity of mercury against syphilis do we want?

Now comes another question. Can syphilis ever be cured without mercury? To this question we must answer in the affirma-

tive. We are not such narrow extremists as to believe that no case of syphilis can get well unless it has been treated by mercury. The animal organism has wonderful recuperative powers. It generates its own antitoxins, and under favorable conditions the *vis medicatrix naturæ* will overcome most diseases (which of course does not mean that it is not our duty to help nature along by all means at our command). A man can get over typhoid fever, smallpox, rheumatism, etc., without any treatment, and there is no reason why a robust constitution, placed under the most favorable hygienic conditions—lots of outdoor exercise, frequent hot baths, etc.—may not recover without the use of mercury. But the percentage of such “hygienic” or “spontaneous” recoveries is very small and the physician who undertakes to treat a case of syphilis without mercury takes on himself a terrible responsibility. And the physician who believes in

mercury, but refrains from using it, because the patient has prejudices against it, hardly deserves the name of physician. A physician must not permit a patient to dictate to him how and with what drugs he should or should not be treated.

One more point may be considered in this introductory chapter before we proceed to the details of the treatment. Some antimercurialists assert that the symptoms of the tertiary stage are really not symptoms of the disease, but the results of the toxic action of mercury. This has been sufficiently answered by Fournier who more than a quarter of a century ago has shown that the worst cerebral and bone lesions are found in syphilitics who have undergone no treatment with mercury at all. And besides, Virchow and Kussmaul have shown that the histologic changes produced by toxic doses of mercury are entirely different from those produced by constitutional syphilis.

## THE CONSTANT OR GALVANIC CURRENT

How it is produced, its properties, its physiologic and therapeutic actions, with a description of some of the cases in which it has been found useful, with methods of application

By J. WALTER TORBETT, M. D., Marlin, Texas

I HAVE selected this subject (1) because it is one of the first forms of electricity known and used in a therapeutic way. (2) Because electricity is becoming much more used both commercially and therapeutically. (3) Because many quacks have rushed into the field of electricity as a new field not well understood and by their blatant, unreasonable advertisements have been able to prey upon the public credulity and pocketbook with equal facility. Such unscrupulous methods have done much to discredit electricity in all its modalities with the honest, conscientious physician and thereby rob him and his patients of one of the greatest remedial agents in many chronic painful ailments. (4) In this rapid age of improve-

ment we are too apt to slight the older, more worthy methods in many cases for the newer, more easily used high-frequency and x-ray currents, which of course have a large field of usefulness of their own but are frequently less beneficial than the constant current.

The continuous, direct, or galvanic, current is derived from the direct dynamo or from cells, either dry or liquid. I prefer cells because the voltage, or pressure, is not so high and can be regulated more easily, hence the current frequently is not so irritating; also because one can then be entirely independent of a power plant, its irregularities and break-downs.

But if you wish to have any success whatever with electricity you must first try to master its properties the same as you would

the various properties and doses of morphine or strychnine. But this has not been done by many of our most prominent nerve specialists, authors of our books on nervous diseases. I was surprised and disappointed on my first trip to New York to hear men of national reputation disregard electricity and recommend a splint and rest for three months in an ordinary case of sciatica, while others of equal prominence would cure such cases in two to four weeks by galvanism, high-frequency, or Morton-wave currents.

#### *The Continuous Current and Its Properties*

This current is one of low voltage, or pressure, usually 30 to 50 cells being preferable for ordinary use, giving about 30 volts and amperage from 1 to 100 or 200 ma. The wall-plates made by most of the reliable houses are all right. They should, of course, have a good meter and rheostat.

The three important properties, according to Prof. Neiswanger, of Chicago, all of which are possessed by the constant current, are electrolysis, phoresis, catalysis. The first, *electrolysis*, is the power of separating compounds into their primary elements. Any substance like flesh, a tumor or small growth containing mineral salts and water can be separated or destroyed. The second property is *phoresis*, which is the power of the current to drive or attract various alkalis from one pole of the battery to the other, being *cataphoresis* when driven from the positive pole, and *anaphoresis* if driven from the negative pole. Substances called bases—those which take the place of hydrogen in an acid—are attracted to the negative pole and hence when applied therapeutically to be driven into the tissues must be placed upon the positive pole. Iodine and other substances which represent the radical which unites with the base (as KI) are applied to the negative pole. The third property is *catalysis*, which is the influence an electric current has upon nutrition through the vasomotor and sympathetic nerves. All currents possess this property to a greater or less degree. Each pole of the battery has distinctly different properties which must be remembered always in treatment.

The electric influence extends throughout the substance connecting the two poles through the lines of least resistance. The elements freed by the power of electrolysis and transferred by phoresis collect only at or near each pole or electrode. At the anode, or positive pole, oxygen, chlorine and acids collect. It is more sedative and anodyne. It is acid in reaction as can be told readily by its turning moistened litmus paper red. If a small copper wire be used as the terminal of each pole and stuck into a potato or piece of meat and the current turned on, the positive terminal will by electrolysis decompose the copper, forming oxychloride of copper and turning the substance around it green. Carbon, gold, block tin and platinum are not so much affected and hence are better used as the anode. These substances collecting at the positive pole are called anions. It forms a seared, contracted scar if carried to the point of cauterization.

The bases, alkalis and hydrogen collect at the negative pole and are called cations. Hence the negative pole is alkaline in reaction, increases the blood supply, promotes absorption of hardened products of inflammation, produces irritation of the nerve supply, has no effect upon the electrode, forms a softer, more elevated, scar if carried to the point of cauterization. Neither pole under 50 ma. is alone germicidal but the power of electrolysis and phoresis may transfer germicides deeply into the tissues.

A full and elaborate discussion of these properties cannot be given in this short paper, but if these properties will be remembered and the pathological conditions carefully determined, if possible, we can readily decide which pole to apply to the part affected.

There is one thing more however which must be looked for, as pointed out by Apostoli, and that is a peculiar idiosyncrasy against electricity. The current must always be turned on and off very slowly and carefully so that all shocks are avoided. The indifferent electrode should best be large and placed some distance from the active one and be well covered and wet with hot water containing bicarbonate of sodium or soap lather. If after these precautions the

patient is made more nervous and the symptoms are decidedly aggravated we may conclude the patient has an idiosyncrasy. Such cases however are rare.

All connections should be free from rust, dirt and grease and tightly made.

*Cases Where the Continuous Current Was Useful*

I will briefly refer to some of the pathological conditions and peculiar and stubborn cases in which the continuous current was the principal agent in the restoration of health. It does not presuppose that it was or should be the only agency used. Diet, fresh air, baths, mental suggestion, etc., should all be made use of as great aids in the removal of any chronic condition.

In amenorrhea do not expect two or three days' treatment to regulate a case that has failed to respond to medicinal treatment continued for months. Anemia, etc., should be treated by diet and medicine, but in those cases who are irregular apparently from weakened functional activity—and when it does come is very scant—the application of the negative by the copper ball or the hydro-electric method if kept up for several weeks, 20 ma. ten minutes, three times each week, will frequently become normal.

In dysmenorrhea, when due to contracted os or to a hypersensitive or neuralgic condition (and I have seen some with no contraction at all and still very painful periods) can be cured almost always by the careful use of the intrauterine electrode, using the negative usually; but if the endometrium is very sensitive and has a tendency to bleed easily, the positive will then be more suitable, 10 to 30 ma. for five minutes, two or three times weekly. The negative is used to dilate the small os. The positive will stick to the membrane unless gently moved, but if it should, a reversal of the current for a few seconds will detach it. These intrauterine applications with the copper, zinc or mercuric cataphoresis of Massey are the greatest means of curing fungous or catarrhal endometritis where they will not submit to an operation. In fact, I have seen those whom curettage failed to benefit relieved by this

method. But the treatment should be continued for three weeks to four months, according to the severity of the case.

I recently had one case of climacteric hemorrhage, due to small fibroids, that refused to yield to packing, cauterization with Battey's solution, and various medicines, which stopped from one application of the positive intrauterine copper electrode annointed with adnephrin. I cured a young lady three years ago of a very severe case of acne rosacea who had taken extensive treatments in Hot Springs and St. Louis, even using the x-ray, by using simply the positive irido-platinum needle on the larger vessels and a five- to ten-minutes' application of a small black tin electrode over the nose wet with adrenalin chloride solution.

In rheumatic or syphilitic periostitis I have for the past three years used the positive electrode annointed with ichthyol over the painful part effecting a cure in a very short time when pus is not present, after constitutional remedies alone had failed.

*Electrolysis of Urethral Strictures*

The late Dr. Robert Newman I think positively established the value of electrolysis in urethral strictures, having treated over 3000 cases successfully. Cases thus treated do not relapse like those treated otherwise. The negative pole must be used for three to six minutes every second day and not more than 4 to 8 ma. I have treated a large number thus affected who also had rheumatism which disappeared just as soon as the strictures were removed. Francis Bishop's method of using a very large electrode over the back and sacrosciatic notch while a smaller one is passed over the nerve and its painful points is the most efficient method in many cases of sciatica.

Local paralysis of the seventh nerve, the hypoglossal, the gustatory and olfactory nerves have been quickly cured if treatment is begun at once. Apply positive over the painful part, while negative is usually placed over nucha or behind and under ear in Bell's palsy. Great care should be taken in giving electricity about the head, especially very small quantities should be used if both

electrodes are applied on the head. Never make the dose anywhere strong enough to be very painful.

Two very severe cases of long standing and much treatment, with neuralgic pains of the neck of the bladder and frequent micturition, were relieved by galvanism, using the positive in the vagina pressed against the bladder-neck and the negative over the abdomen. One had some small caruncles to which a solution of adrenalin and cocaine were applied followed by a strong current with the bare copper electrode. The caruncles had been cut off several times without good results.

I have treated two cases of specific retinitis, one diagnosed and treated by one of the best oculists in the state for about a year and thoroughly saturated with specific treatment, but with very little improvement. To the specific treatment galvanism was added; he regained his sight sufficiently to read large print and returned to work. He neglected his specific treatment; though his eyes remained the same he died later from acute bulbar palsy.

The other case, of only a few month's duration, took baths and treatment at Marlin and then at Hot Springs, with all the mercury and iodide he could use, with but little benefit; had to be led about. But by the addition of galvanism and high-frequency electricity he so improved that he now reads the newspaper and has remained so for a year. These cases received 5 ma. four to five minutes, negative over the eyes and positive over back of neck.

These cases have not been detailed here as examples of wonderful cures I have wrought but simply as results which anyone may and can achieve with the galvanic current by careful and painstaking work.

#### *Electrical Treatment for Impotence*

The hydroelectric application of the positive pole with the copper wire in the French catheter to the deep urethra is a very rapid

and remarkable treatment in the cure of functional impotence due to atonic, relaxed and congested conditions of the deep urethra. Also very beneficial in cases of chronic gleet.

There are two more uses of the galvanic current which I wish to mention, as taught so ably by Dr. G. Batton Massey, of Philadelphia. The first is the Apostoli treatment for interstitial fibroids, the intrauterine application of 100 ma. or less with copper electrode continued two or three times weekly for several months. He reports 110 cases symptomatically cured. The other is his method of mercuric cataphoresis in the cure of various cancers. The results shown by the "before and after" stereopticon pictures as given at the meetings of the American Electrotherapeutic Association the past three years have been remarkable; many cases, some inoperable, being cured more quickly than by the x-ray or any other method. That however is strictly a surgical procedure requiring a general anesthetic, the technic being given in full in his work on "Conservative Gynecology" and would require too much space to be described here.

The use of the negative pole—attached to a needle, of course—is a well-known method for removing warts, moles, also superfluous hairs, leaving very little scar.

I have a case of general, or multiple, neuritis now who is improving, more I think from the use of this current than anything else; she continued to grow worse from medicine alone. Of course this case is using mechanical vibration and tonics, as very few cases are treated by galvanism alone; but it is one of the agents that does the most good and recovery in suitable cases is not nearly so rapid when left off.

If this article shall succeed in stimulating a careful study and use of the galvanic current instead of the too common careless way of turning the apparatus over to the patient to be used as he pleases, I shall feel amply repaid for the trouble of its preparation.





# FAULTY FASHIONS IN WOMEN'S DRESS

How abdominal compression by tight lacing has become an important factor in the production of pelvic disease. Read before the West Side Clinical Society, New York City, October 10, 1907

By WILLIAM EDWARDS FITCH, M. D., New York City

Lecturer on Surgery, Fordham University School of Medicine; Attending Surgeon, St. Luke's Hospital Dispensary; Assistant Attending Gynecologist, Presbyterian Hospital Dispensary; Attending Physician, Vanderbilt Clinic, etc.

"Seest thou not what a deformed thief this fashion is?"

WHEN I was requested by the chairman of your program committee to prepare a paper of more or less universal interest to the general practitioner, I was at a loss to answer him, and asked for time. After much thoughtful consideration I became convinced that the subject of "tight lacing" is of special interest to the physician, as well as to the gynecologist, while to womankind it is of momentous importance, and my only excuse for bringing this subject before you is the absolute necessity for seriously considering the subject of tight lacing as it exists today in all civilized countries.

Believing implicitly in the truth and earnestness of the views enunciated in this paper, the author feels no degree of trepidation in condemning tight lacing, and asks your thoughtful consideration of the subject as philanthropist, humanitarian and physician. I fear that in the mad rush for scientific research, we have, as physicians, overlooked the importance of this subject as an etiological factor in diseases of the female organs of generation. There is no one subject to which more importance should be given by the profession, and the author will try to point out faithfully, in a practical manner, the baneful effects of tight lacing, both as a factor in the etiology of disease and as an impediment to normal development of the uterine organs, which offers the greatest hindrance to disease; and at the same time to contrast the well-developed condition and freedom from pelvic disorders in those who do not practice tight lacing, with the frail constitutions, barrenness and various uterine dis-

orders found in those who wear the corset tight. I wish it understood, in the beginning, that tight lacing is not confined only to those who wear the corset, since other articles of clothing may be worn so tight as to do practically the same harm, though to a less degree.

## *Anatomy of the Female Pelvis*

Before discussing this subject in detail it might be well to review briefly the anatomy of the female pelvis so that you may better comprehend the idea intended to be conveyed in this paper.

The female pelvis consists of a solid unyielding structure of bones with a false pelvis representing a truncated cone, the base looking upward and slightly flattened on its anterior; the external and internal oblique, transversalis, pyramidalis and rectus muscles, with sheaths and tendons combining, form the lateral and anterior walls of a cylinder continuous with the last-named structure. The spinal column lined with the quadratus lumborum muscles form the posterior wall.

Inclosed within this cylindrical body-pelvis, from diaphragm downward, are the various abdominal and pelvic organs, all readily and easily displaced by pressure. Among these we find the uterus, which remains undeveloped and in an infantile state until near the approach of puberty, when it develops rapidly and continues to increase in size, proportionately to the rest of the body, until the normal size is reached, which is usually between the sixteenth and twentieth year.

The virgin uterus is about two and one-half inches long, its width, at about the level of the fallopian tubes, nearly one and

three-quarter inches, and its weight about twelve drams. It is suspended in the pelvis by ligaments amounting to little less than folds of peritoneum. The fallopian tubes and ovaries, with feeble supports, spread out on the right and left of the uterus in connection with the broad ligaments almost at right angles.

The ovaries formed from the wolffian bodies rapidly begin to develop at the age of twelve—when a new era sets in—maturation and periodical rupture of the graffian follicles; just before and after menstruation the remaining parts of the organs of generation rapidly increase in size. At least eighty-five percent of girls reach full development of their generative organs between the twelfth and sixteenth years. It must not be overlooked that the uterus and appendages are covered almost entirely by peritoneum, which is very susceptible to injury from even the slightest causes: that the construction of vessels supplying blood is of such a nature as to favor either anemia or congestion, proportionate to the degree of compression exerted. Knowing the free mobility of the uterus and appendages and the increased supply of blood the parts are receiving or should receive, we should more clearly understand the effects of pressure on an organ requiring rest and freedom during the period of development.

#### *The Corset First Worn at Puberty*

It is at or about this period, or more frequently earlier, that the young girl is allowed to commence wearing corsets, and she is not always given the proper instructions as to the degree of constriction that should be permitted.

"Either thou art most ignorant by age or wert born a fool."

\* \* \*

"Nature stood with stupid eyes  
And gaping mouth which testified surprise."

The law of growth in the human body is one which has not always been considered in relation to the development of girls. The energies of the body rise and fall in each individual with a certain rhythm. Each swell of the physical growth is designated to bring about certain morphological

and functional conditions; and when these conditions are not secured at the time nature is accustomed to bring them about or when their maturation and development is interfered with from faulty fashions in dress, there is a possibility of their not being completed and perfected in subsequent years. The maturity of the sexual apparatus and its function in the girl must be accomplished at that stage of develop-



Fig. 1.—Girl bending forward at work, showing how "tight lacing" increases abdominal pressure and depresses the pelvis organs.

ment known as puberty. It is, of all periods in the life of woman, the most important, for her future health, both physical and mental, depend upon its completion and perfection. All the care and all the intelligence that it is possible for mothers and physicians to bestow upon her should be given at this time. Not only motherhood and subsequent health, but sanity and life-long happiness depend upon the perfect development of the female organs of generation. It does not seem unreasonable, therefore, that the foolish fashion of wearing tight corsets should be taboo.

#### *Effect of the Ordinary Corset*

The corset offered in the shops is so constructed that when worn it exerts its greatest constriction—pressure—from an inch or so above the brim of the pelvis downward, constricting the abdominal walls, the lower part of the thorax, and pushing inward the costal cartilages, often causing the seventh

and eighth ribs to overlap. The greatest point of constriction and compression is at the waist-line, in the immediate neighborhood of the stomach, which when distended, as after a hearty meal, produces the "hour-glass" stomach, often observed in this class of patients.

Tight lacing crowds the small intestines with the accompanying mesentery and

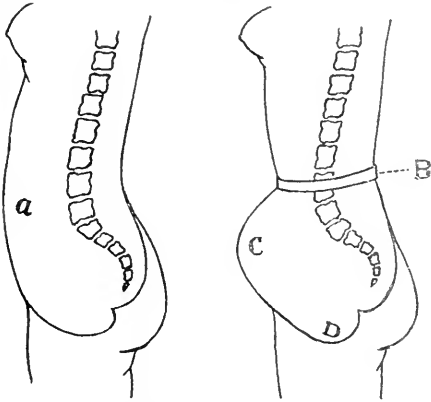


Fig. 2.—(After Gallant.) A—Normal contour of the anterior abdominal wall. B—Same patient with constricting waist band. C—Point of greatest protrusion. D—Pelvic floor bulged down from waist constriction.

colon into the pelvis, filling Douglas's anterior cul-de-sac; if the rectum is loaded with feces and the bladder empty, anteversion of the uterus follows; if the bladder is distended and the rectum empty, retroversion results, displacing the intestines into the posterior cul-de-sac. In most of these cases, where the compression is great enough to interfere with and retard the normal peristaltic action of the intestines, constipation is also produced.

#### *Respiration of the "Natural" Woman*

We no longer doubt that compression of any part or organ interferes with physiological growth and function, therefore all women who wear tight corsets and constricting waist-bands breathe with a well-marked sternal movement, which is unnatural, since nature intended woman to breathe like man—abdominally. Women when asleep breathe like men, and all animals, male and female, breathe alike—abdominally. Mays<sup>1</sup> has shown that Indian girls breathe like men, and Kellogg<sup>2</sup> has confirmed

this observation. Among several Indian tribes, Chinese women, agricultural women, English pit-brow lassies, and civilized women who wear their clothing loose at the waist or suspended from the shoulder, all show the same type of abdominal breathing; and the flimsy argument that chest-breathing is normal to women, because it is necessary during gestation, goes to the wind when it is shown<sup>3</sup> that even in the last months of pregnancy abdominal respiratory movements predominate over thoracic movements. The most active respiratory organ, that muscle of respiration, the diaphragm, adapts itself most beautifully to circumstances, so that, when from tight lacing the abdomen is constricted, the type of breathing becomes thoracic, when pressure is relieved, it again changes to the abdominal type.

The Egyptians, who were foremost in the promotion of civilization, education and art, while allowing variations in luxuries, were the first to formulate legal barriers against the introduction of "any new ideas"

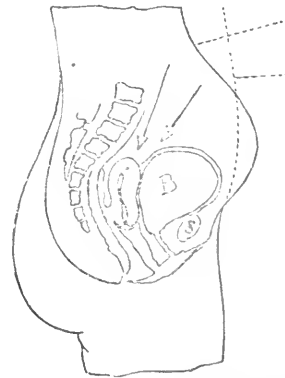


Fig. 3.—C—Corset line. N—Normal outline B—Distended bladder. U—Uterus retroverted from tight lacing. S—Symphysis pubis.

of fashion in articles of dress tending to constrict the waist or in any way to attempt to modify the true teachings of nature.

#### *Lacing Interferes with Abdominal Respiration*

Does tight lacing and faulty dress interfere with normal abdominal respiration? The reasons for an affirmative answer are based on recent experimental researches by

which certain facts seem well established that heretofore have largely been matters of speculation, opinion, or prejudice, therefore we conclude as follows:

a. Normal breathing in woman is like that of man—abdominal; tight lacing changes the type to costal<sup>4</sup>.

b. The pelvic organs normally make a considerable excursion with each respira-

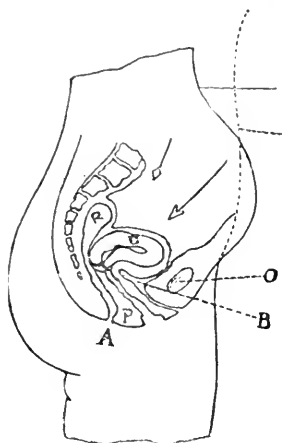


Fig. 4.—C—Corset line. N—Normal outline. U—Uterus forced down by corset, producing antiflexion. O—Os pubis. B—Empty bladder. R—Loaded rectum. P—Perineal body. A—Anus.

tion<sup>5</sup>; tight lacing in the ambulatory position prevents this motion almost entirely.

c. Sitting or leaning forward lessens intra-abdominal pressure<sup>6</sup>; tight lacing in these positions greatly increases intraabdominal pressure<sup>7</sup>.

d. Tight lacing displaces the uterus downward from 2 to 3 inches<sup>8</sup>.

e. The pelvic floor is bulged downward by tight lacing from 2 1-2 to 3 inches and the circulation rendered sluggish<sup>9</sup>.

f. Undue constriction of the waist from corsets is a constant impediment to free indoor exercises, and outdoor gymnastics are hampered.

g. It has been shown that a loose-fitting corset diminishes chest capacity one-fifth<sup>10</sup> and a tight-fitting corset tends to atrophy of the abdominal muscle and accumulation of fat.

h. With each movement of the diaphragm the structures of the pelvic floor with the uterus and its adnexa are carried

downward from 1 to 3 inches and up again, in the case of women who have worn loose clothing about the waist.<sup>11</sup>

### *Impeding Pelvic Circulation*

Alternating pressure and relaxation accelerates the free flow of blood through the large venous plexuses and lymphatics; alternating traction and relaxation tends to develop uterine ligaments and their peritoneal investment, and gives tone to the muscular pelvic floor; alternate stretching and slackening tones up elastic supports. With each full inspiration the descent of the diaphragm increases abdominal pressure, and lessens that in the chest; blood is forced out of the portal and pelvic veins and sucked up above the diaphragm, therefore it is plain to the critical observer that any form of dress that cripples the free excursions of the diaphragm impedes the pelvic circulation. The blood flow of the uterine organs is seriously hindered in another way. The valveless ovarian veins empty in the area of greatest corset pressure which causes a damming back of a long volume of blood.

When a constricting corset is worn, little or no motion can occur, because all the

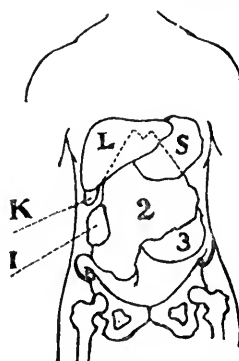


Fig. 5.—K L S—Kidney, liver and stomach in normal position. 1, 2, 3—Same organs displaced by tight lacing.

structures in the true pelvis are carried downward by constant pressure and crammed into the cylindrical cone-pelvis so tightly as entirely to impede movement.

Kellogg and others<sup>12</sup> have demonstrated that pressure from a tight corset, or from a loose corset with the wearer stooping

over or bending forward, bulges the pelvic floor downward to the utmost limit of its capacity, and the uterus is correspondingly forced to descend. This constant pressure for hours keeps the uterine supports tense and stretched for many hours daily, while exertion or stooping overstrains these taut structures still further.

Africans, Indians, Eskimos and the women of all other nations who wear loose-fitting clothing are almost entirely free from pelvic disease. It is in this class of women that we find the most natural and perfect pregnancy, the easiest and almost painless deliveries and the most rapid and perfectly satisfactory puerperium. Any physician who has practised medicine in the rural districts for the well-developed and healthy country woman, and later in the city for the dainty, delicate, badly nourished, poorly developed, and where tight lacing and other foolish fashions are practically universal, will soon be convinced that there is an explanation for the frequency of female ills and frailty in the latter, as compared with the freshness, vim and vigor, and fine physique of the former.

#### *Tight Lacing a Cause of Uterine Maldevelopment*

To any clear-minded, thinking physician there can be no doubt of the claim<sup>13</sup> that 75 percent of the women who habitually practise tight lacing to any considerable extent suffer from maldevelopment of the uterine organs, especially if the corset is worn at that period of life when uterine development conduces to diseased conditions, and practically renders the normal physiological functions of the organs incomplete and painful, nor will it be longer doubted by the close observer of passing events.

#### *Uterine Displacement*

That subject about which so much has been written during the recent past, and the treatment of which has been so varied that "falling of the womb," so prevalent in the minds of so many women and a "hobby" for such a large number of doctors in the main, may be laid to the *corset*.

In no forms of mammalia, other than womankind of the civilized races, do we find uterine displacement or diseased conditions of the generative organs. Why is this? Tight lacing displaces the uterine organs and appendages, and maldevelopment is the result. In antelexion, which is often accompanied by inflammation of the uterosacral ligaments, the downward traction on the tender ligaments is especially dangerous, moreover, the increased pressure from above flexes the uterus still farther when the bladder is empty. Dickenson<sup>14</sup> relates a case of a robust dress-maker who consulted him, measuring 5 inches less with corsets on than over her undershirt with corsets off. Her cervix and fundus met, so extensive was the bend. Without other treatment than removal of

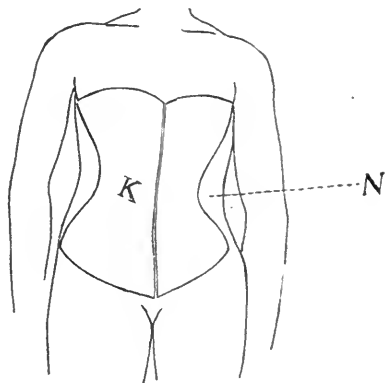


Fig. 6.—K—Girl in the ordinary corset. N—Same girl without corset; normal waist line. Note comparisons.

the corset the uterus assumed its normal position in three weeks. In decensus of any degree the ordinary corset should not be worn.

#### *How Lacing Causes Retroversion*

In retroversion the pressure is exerted on the anterior surface of the uterus, forcing the fundus backward. Indeed whenever an overdistended bladder tilts the organ backward, abdominal pressure increases the displacement. Kellogg and others have shown by autopsy<sup>15</sup> that the abdominal organs are displaced by corset wearing. The liver has often been found pushed downward even to the iliac crests. One or both kid-

neys in thirty out of one hundred cases examined, were found abnormally low.

Maldevelopment of the uterus and appendages effects menstruation in various ways. Amenorrhea is frequently the result of a poorly developed mucosa and its adnexa together with faulty developed ovaries—a condition which, if neglected, often leads to atrophy, or you may find congestion—menorrhagia, with long-continued profuse flow. Dysmenorrhea is a condition mainly due to maldevelopment of both uterus and appendages, the nervous system, and also to the imperfect development of the muscular and cellular tissue entering into their make-up, rendering them inadequate to their physiological requirements.

Physiologists tell us that there are in the uterus embryonic cells which remain throughout life; they are the cause of epithelioma of the cervix, and the cervix in 98 percent of cases is the seat of uterine cancer, local irritation and ulceration being the exciting cause. Tight lacing by producing malposition forces the os downward against the floor of the vagina, causing inflammation, irritation and eventually ulceration. A prominent author says<sup>16</sup>: "Up to puberty the mortality for carcinoma is the same; afterward the relative proportion of female to male deaths gradually rises till it attains its maximum at about the sixtieth year. Cancer of the uterus is a rare disease among Indian women; occurring with so great frequency in all civilized countries it must have its explanation in some custom peculiar to such civilization."

Miscarriages, lacerated cervix, weak and inefficient contractions of the uterus in labor, protracted puerperium, the result of subinvolution, may often find their true explanation to be due, directly or indirectly, to maldevelopment. The increased frequency of endometritis, hyperplasia, erosion, stenosis, sterility and atresia of the cervix and os, must be largely due to this cause—a large

number of the parauterine cysts, as well as papillomatous cysts of the hilum, parovarian cysts of the broad ligaments, have their origin in these unobliterated ducts and the remains of the wolffian bodies. Maldevelopment is surely accountable for this condition of affairs. Fibroid and other tumors of the uterus have their etiology in maldevelopment of the organs of generation.<sup>17</sup>

During the past few decades the Germans, who have always been early and earnest workers in new fields, have been busy inventing new bandages, supports and corsets for displaced organs. Israel, of Berlin<sup>18</sup>, in a comparatively recent monograph describes a waist that acts by not interfering with the normal motions of the body, nor having any pads for making direct pressure over any of the abdominal organs, or the

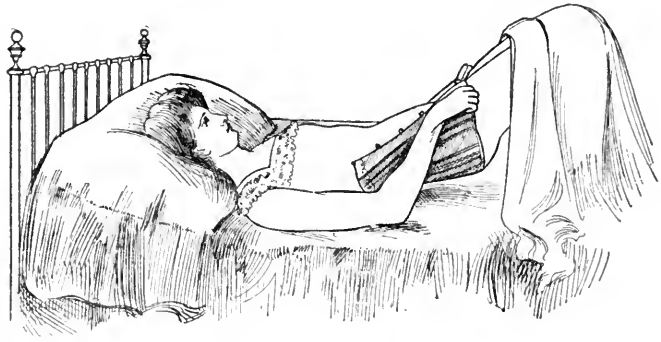


Fig. 7.—Proper way of putting on the straight-front corset.

organs of generation. It is an apparatus with triangular air-cushions, made to fit over Poupart's ligament and the iliac crests and held in place by elastic bandages reinforced by braces and stays.

A few years ago Gallant, of New York, published<sup>19</sup> some original ideas on a new straight-front corset as an ideal orthopedic kidney support. He believes that the weight of the clothing and compression at the waist line at and after puberty have an important effect on girls in producing movable kidney.<sup>20</sup> He recalls fifty cases where he made careful measurements and found abnormalities in the length of the trunk, as shown by the distance between the suprasternal notch and upper border of the symphysis pubis, and the deviation from the normal relation between the circumference of the waist and hips at

the trochanters. There was a hollowing of the epigastrium and bulging of the hypogastrium. A respiratory rise and fall of the greater curvature of the stomach was observed in thin-walled subjects.

Displacements occurred frequently after child-birth, which could have been remedied by a firm abdominal binder and exercise while in bed. Prolapsus of the colon and stomach were generally associated with that of the kidney. These conditions were not remedied by operation. According to Gallant a properly shaped corset, put on before rising, in a semiopisthotonos position, makes the patient comfortable and prevents complications.

It remained, however, for Heath, of New York City, working along independent lines, to perfect the straight-front corset—a specially designed abdominal corset that meets the demand of physicians for one that will successfully support displaced organs. The Heath corset is built on specially designed lines, altogether different from all other corsets, and when perfectly (made to measure) fitted, lowers the waist-line in front, gives perfect freedom of movement to the entire chest-cavity, promotes deep breathing, and at the same time gives direct pressure and support from below upward and backward throughout the lower abdominal region, which not only reduces a large abdomen, but holds in place all prolapsed viscera.

With this corset there is absolutely no constriction at the waist-line, nor above; all the compression is across the hips and lower abdomen, which is lifted upward and backward, leaving the chest free, allowing deep breathing, permitting chest expansion, and favoring an erect carriage. The corset is made with a long graceful straight front which entirely covers the abdomen to the os pubis, at the same time adds support to the diaphragm, instead of breaking it down as do other corsets. The waist-line of this corset runs below the short ribs, which lengthens the waist, producing graceful lines without compression, encouraging deep respiratory movements with the effect of enlarging the bust measure and throwing the chest forward. The average reduction of the abdomen from the first wearing is from 3

to 5 inches and from 6 to 10 inches after the first month.

Rigidity instead of flexibility have marked every corset heretofore manufactured. This corset combines flexibility with elasticity, which permits it to yield to every movement of the body, leaving the organs of breathing, the stomach, the liver and kidneys, the uterus and appendages in their normal and natural position of unrestricted freedom. No woman ever thinks of loosening this corset or feels the need, when it is removed, of taking a deep breath. On the other hand, all women who practise tight lacing with the ordinary corset from the shops complain of pain on removing their corsets. Why is this? Because the pain is caused from the organs attempting to assume their normal position. This is the only surgical corset manufactured which reduces a large abdomen and holds in place all prolapsed viscera, and combines all the style and elegance of figure of the ultra-fashionable. As a surgical corset it is indicated in "floating kidney," enteroptosis, gastroptosis, dilation of the stomach, and for supporting the abdomen after laparotomy and parturition.

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# USE OF FORCEPS IN COUNTRY PRACTICE

When to use the forceps and when not to use them;  
the indications for the low and the high forceps operations;  
suggestions concerning technic and some cautions

By J. S. HIGGINS, Ph. G., M. D., Scipio, Arkansas

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**F**ORCEPS should only be applied in cases which are barred in some way; that is, that condition in which labor does not progress naturally and with the ease and rapidity that belongs to natural labor-cases, viz., when the pains flag and the woman becomes irritable or weakened by exhaustive efforts in bearing down; where the pelvis is abnormal or the woman is in a debilitated condition from disease or from other causes of any kind whatsoever; where the woman's system is saturated with uremic poisons and puerperal convulsions are imminent; in placenta prævia; with the fetus very large or the mother very small; where the cranium presses the obturator nerve for any length of time; where the pains are very severe and cause undue bearing down or the uterus is in an undue state of contraction and liable to cause rupture of the uterus; in hysterical patients or patients who have an abnormal condition of the vascular system; in tubercular patients and patients who have been accustomed to wearing corsets very tight.

## *Discretion is Necessary*

Of course some discretion in the use of forceps must be exercised. The stages of forceps application are conceded to be three: low, medium and high or floating. It must be remembered that one cannot apply forceps unless the os uteri is dilated, but one may anesthetize the patient and dilate the os with fingers or dilators and then introduce the forceps. The operator must be sure not to catch the uterine walls in the forceps; if he does, there will be untold trouble and condemnation upon oneself, besides disaster to the patient.

The low application is by far the easiest and safest of all, when the head is ap-

proaching the perineum. The medium is not very hard, considering the difficulties experienced in the high. Of course the dangers attendant in the medium are increased as one goes up, and the high application is exceedingly difficult and dangerous. One had better be cautious and have another physician present at least.

## *High Forceps Operation*

The indications for high forceps application are rare, however, and one usually has time to procure help, being careful to explain facts to the family, especially the husband. The patient should be given some anodyne to allay her pain while help is coming. This is for high or floating, but in any other the obstetrician is not excusable to wait, in emergencies, but must save the patient. Anesthetization of the patient must be begun by the doctor who later hands the inhaler to some one (the husband preferably), and then proceeds. The woman should be watched at intervals of one or two minutes by the accoucheur, who should be very cautious in the manipulations, the patient not being conscious of what is going on. Particularly must he be sure the forceps are properly applied and locked. Also must he proceed with caution, not letting the forceps slip, for they may cause extensive sloughing from traumatism. It is necessary to watch the perineum and not let it lacerate, if possible; if it tear it must be repaired at once.

A creolin douche afterward is advisable in order to disinfect any traumatism that may exist. The patient must be instructed not to touch herself with her fingers, as it may cause sepsis. Bed and patient must be kept clean and dry and much trouble will be avoided in the outcome at least.



## ❖ SURGICAL THERAPEUTICS ❖

### INTUSSUSCEPTION

Nothing but operative treatment is to be advised in these cases; but when the parents will not consent to immediate abdominal section, the surgeon may still do something while waiting. But, first of all, he should freely explain that early surgical interference is indicated in order to free the bowel from a position which threatens to render it necrotic by disturbance of the mesenteric circulation; this nutritional disturbance of the bowel, due to occlusion of the mesenteric vessels, must be relieved as soon as possible before the infection of the peritoneal cavity promptly annihilates the results of the operation. But, before urging operation, the doctor must be pretty sure of his diagnosis, since it is humiliating to be discharged and have some "granny" cure the patient by a simple enema.

The diagnosis of intussusception is easy. It depends upon feeling the "lump" of the invagination, and the passage of bloody mucus per anum. But the examination of the abdomen should invariably be conducted under general anesthesia. The most important therapeutic indication consists in the reestablishment of the obstructed mesenteric circulation. It is to be then explained to the friends that all internal therapeutic measures are to be rejected as inadequate to deal with the condition of the incarcerated segment of the bowel. As soon as the diagnosis is positive, laparotomy should be performed, because this form of treatment alone can be relied upon to reestablish normal conditions.

Disinvagination was always accomplished by gradually crowding the invaginatedum from the tip through the entire sheath of the invaginations, using the thumb and index finger of both hands. After the invaginated bowel segment has been reduced, bit\* by bit, through these manipulations, cautious traction may be employed for the purpose of

determining that the surfaces of intussusceptum and intussusciens slip smoothly by each other. It is a serious mistake, however, to attempt the reduction of the invagination only by means of traction, because the mechanical conditions of the intussusception are not recognized in this manipulation. The outcome of a given case depends not alone upon the duration of the intussusception, but also upon the degree of the obstruction of the mesenteric circulation.

Opiates should never be given; nor on the contrary, should physic. But the lower bowel should be washed out repeatedly with warm water to which has been added a little soap and glycerin. Then the anesthetic is administered. If the diagnosis is then sure, operation should be urged; if refused it is far better to withdraw from the case than to continue—to sign the death certificate.

### TREATMENT AFTER KIDNEY OPERATIONS

Three things are prominent after kidney operations, as nephrectomy: vomiting, pain and drainage. The first two may be controlled, usually, by hypodermics of hyosine hydrobromide (gr. 1-100) and morphine (gr. 1-4) every three to six hours, this combination being better than plain morphine, which has a tendency to check urine secretion; and 1-100 grain of digitalin may be added with advantage. Immediately after operation (when the pelvis of the kidney is opened or the kidney removed) the temperature rises to 104° or 105°F. in a few hours, but it usually drops to normal as soon as the opposite kidney begins to functionate actively. Should the temperature become subnormal and vomiting persist, acute sepsis is coming on and must be combatted earnestly, with particular attention to elimination and to drainage. The bowels must be kept active

and perspiration induced (pilocarpine hypodermically and much water by mouth.) The wound is best opened up widely even if it has been partly sutured, washed out and packed with gauze.

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#### TREATMENT AFTER BLADDER OPERATION

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Since postoperative anuria is more likely to occur here than in any other one may give a liter (one quart) of normal salt solution by hypodermoclysis immediately after the patient is returned to bed; and especially so if there be much shock. As soon as possible, too, as much water as the patient can drink should be given. When suprapubic cystotomy has been done the urine is usually carried away by a long rubber tube, but there is much leakage around the opening so it is necessary to change the gauze two or three times a day; and if there be much irritation of the bladder (or cystitis) it is best also to wash out the bladder at the same time, using a saturated solution of boric acid. The irritation of skin is not as serious as in perineal cystotomy but sometimes requires careful attention.

When the bladder has been sutured and the abdominal incision closed the wound requires no attention until the time to remove the sutures (ninth or tenth day) provided the gauze does not become soiled with urine.

But as it is always necessary to use the catheter every four hours for a week, in such cases, the dressings usually become sufficiently infected to demand several changes; the layers next to the incision being untouched whenever possible. With all the drainage-cases a rubber sheet must be spread upon the bed and soft pads laid over it to catch the urine, these being changed as often as possible. For if the patient's skin is not protected from the irritating effect of constant immersion in urine, bed-sores of the most aggravated kind may form. To assist in preventing this calamity the back, hips and thighs ought to be bathed in diluted alcohol once every day; and may be smeared with vaseline after each alcohol-bath. As soon as the strength

will permit the patient must be compelled to sit up in a chair daily, upon a rubber ring, for as many hours as possible. In perineal drainage there is likely to be a considerable destruction of tissue by necrosis—the urine getting into the muscular and fascial layers in spite of anything that can be done. These sloughs must be cut away from time to time, but not too soon; often it is best to wait several days before pulling them out. After granulation is well established there will be no further trouble, but with old people the process of granulation is not progressing satisfactorily even after two or three weeks, sometimes, and the continuation of necrosis becomes a serious menace. Here the free application of iodoform may be tried, or balsam of Peru smeared into the depths of the wound. It requires from two to four weeks for the bladder to close—and occasionally there is some leakage for many weeks.

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#### PLEURITIS

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Pleurisy becomes a surgical disease as soon as it is apparent that the effusion is not being absorbed or that the serum is infected with pyogenic bacteria. When it is decided that the serum accumulated in the pleura is to be evacuated the skin must be scrubbed carefully with soap and water; a few drops of cocaine injected beneath the skin and into the intercostal muscles, but *not* into the pleura; a large aspirator-needle is boiled for at least ten minutes; the skin pulled a little upward or downward and from over an intercostal space and the needle thrust quickly and directly into the pleural space. A boiled stylet must be at hand to push through the needle from time to time if it become clogged by flakes of lymph. The fluid must be allowed to escape slowly so that the lung may expand (if adhesions have not formed).

When all has been withdrawn, the needle is taken out by a short, quick jerk and the skin allowed to slip over the opening. A little piece of gauze may be placed over the skin-puncture and held in place by a strip of adhesive plaster. When pus is present the

operation of choice is the Estlander for children: removal of a small part of one rib, or even a mere slit in the parietal pleura sometimes effecting a perfect cure if the subsequent dressings be made with sufficient care as to asepsis; for adults the Schede operation (excision of the chest-wall, including the parietal pleura, over at least one-third of the entire side affected) is the only one which promises complete cure, since it permits the skin and muscles to fall in on the visceral pleura and so obliterate the huge pus-sac. It is remarkable how much the lung will expand after such a formidable operation. The most energetic antituberculous and tonic treatment must be kept up for months.

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### RICKETS

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There being in this interesting disease of early childhood a deficiency of the elements which should enter into the formation of bones—that is, a “bone-salt starvation”—the great indication aside from proper food is to supply the deficiency. Phosphide of zinc is highly praised; from one milligram to one centigram (gr. 1-67 to gr. 1-6) three times a day, according to age and the way it is borne.

In rickets there is always a tendency of the digestive apparatus to fail in its function, so great care must be exercised not to give zinc, lime, etc., in doses too large to be accepted by the stomach and bowels without irritation. The syrup of the lactophosphate of lime is a most praiseworthy preparation; but some children cannot take it for any great length of time; it may be tried in doses of a half teaspoonful thrice daily with a child of two or three years. On account of this tendency to stomach irritation, too, codliver oil cannot often be given, though the most eminent authorities advise it, rich cream does better; when anemia is marked and there are evidences of tuberculosis (formerly called “scrofula”) forced feeding may be necessary with the exhibition of syrup of the iodide of iron; one drop three times a day being better than larger dosage.

If there is the slightest tendency to constipation (as when the patient is taking iron) laxatives must be ordered at bedtime, preferably phosphate of sodium. Phosphorus (or the phosphates) must be given freely on account of the influence phosphorus has upon the growth of bones. One or two decigrams of phosphate of lime (1 to 3 grains) may be given in milk three times a day without the knowledge of the child. Baths followed by massage are excellent, but care must be exercised not to bathe the patient too frequently since hot baths weaken to a marked degree—and in these cases every energy must be directed toward building up the patient. If there be a marked tendency to bending of the legs, the little patient must be kept, as much as possible, from walking. Outdoor life is indispensable; and this is true of good food also.

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### CANCER OF THE STOMACH

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Nobody now doubts that cancer of the stomach can be cured by early operation; the only trouble is, (a) recognizing the character of the affection early enough and (b) securing consent of patient for operation. Anent the first part Aldor speaks highly of three laboratory methods which have been carefully tested by him. Salkowski's method of determining the presence of albumose in the urine is regarded as a great help in these cases. In forty carcinoma cases 56 percent showed the presence of albumose. While the mere presence is not significant of carcinoma, nevertheless its constant presence is of great significance. Solomon's method of determining the presence of nitrogen in the carefully washed stomach is also regarded as valuable in recognizing the presence of an ulcer, not necessarily, however, of a malignant type. Lastly, concealed hemorrhage is of great importance and when suspected the patient should be placed in the hospital, where a careful diet can be carried out for some days before any conclusions can be drawn from the positive findings. Aldor emphasizes the fact that while these three methods in themselves are not of great

diagnostic value, they may lead to a very early diagnosis when all three are present together with other symptoms.

#### TREATMENT AFTER OPERATION FOR HEMORRHOIDS

When piles have been removed by either ligature or clamp and cautery the sphincter having always been forcibly dilated prior to operation it is imperative that the rectal packing extend very high into the gut and that it be tamped in very tightly. This pack is, preferably, iodoform gauze, though dry bichloride gauze will do. Over this a pad of absorbent gauze or cotton is placed, held by a T-bandage applied tightly. The outside gauze may be changed every day, if

desired, but the packing must not be disturbed for from four to six days, during which time peristalsis is to be controlled by opium or morphine by the mouth. When accumulation of gas becomes distressing, however, the plug must be removed and the bowels permitted to move. In many cases it is best to give a good saline laxative and let the bowel-movement force the packing out—assisted by the patient's own fingers, as this will cause far less suffering than if removed by doctor or nurse. If it be left until the fifth or sixth day, however, it usually slips out without much discomfort. An enema should be taken immediately after the first bowel-movement, and this should be repeated daily thereafter for at least a week.

## GYNECOLOGICAL THERAPEUTICS

### GONORRHEA IN WOMEN

For the vulvovaginitis due to Neisser's coccus one may use an injection twice a day of a quart of 1 in 2000 or 1 in 4000 solution of potassium permanganate in hot water, followed by a solution of mercury bichloride, 1 in 2000, and a dressing of 5-percent ichthylol in glycerin. Resorcin, in doses of 1 gram (15 grains) may be given internally, three times daily, with advantage. Twice a week silver nitrate, ten grains to the ounce of water, should be used to swab the mucous membrane, and following this, a powder of alum, 3 parts, tannin, 2 parts, should be insufflated. Frequent bathing and other hygienic means should be employed. If there is complicating cervicitis and metritis, dressings of ichthylol, 10 parts; iodoform 5 parts; glycerin, 200 parts, should be used. Local applications of tincture of iodine or of zinc chloride, 1 in 50, may be employed, and intrauterine injections of about 1 1-2 ounces of the following solution: alum, 2 1-2 parts, tincture of iodine and alcohol, each 25 parts. Urethritis should

be treated by the balsams, the alkalis, and by irrigations of silver nitrate or protargol solutions, or a 1-percent aqueous solution of thallin sulphate.

### ARTERIOSCLEROSIS OF THE UTERUS

Persistent metorrhagia not dependent upon fibroids, cancer or gonococcal or syphilitic infection is not common; it may be due, rarely, to chronic metritis with arteriosclerosis. Treatment is of no avail (save hysterectomy), except in the lighter forms of the nonsenile variety. At times rest in bed and regulation of the intestinal tract is sufficient, since such treatment relieves the congestion of the pelvic organs. Occasionally swabbing out the uterine cavity with ferric chloride is of value, in the meantime repeated vaginal tampons being employed. Ergot is entirely unsatisfactory since it is impossible for this drug to bring the rigid vessel-walls into contraction. For the same reason curettage is of no avail. Indeed in arteriosclerosis of the uterus all methods of treatment but one have proven to be useless

In spite of everything the menorrhagia becomes steadily more marked, the intermenstrual periods become shorter and shorter until the hemorrhage is more or less continuous. Hence one should not put off too long the one certain method of cure—total extirpation of the uterus. Nor should this conclusion be difficult to decide upon, since most of the women already are approaching the menopause.

### GARRULITAS VULVÆ

This term has been used to express that condition of the vagina and vulva in which air is expelled audibly from the vagina, from time to time, giving rise to a suspicion of the existence of rectovaginal fistula. In most of these cases examination will show the introitus to be large and lax, with a moderate degree of prolapse of both anterior and posterior walls of the vagina. The perineum is always intact.

If the patient be requested to lie on her back with her knees drawn up and her arms placed above her head, by introducing the finger into the vagina, it will be found that the vagina fills with air on taking a deep inspiration. The same result will be noted when she is placed in the knee-elbow position. This can be repeated as often as one likes; on expiration, a loud noise will be produced by the air passing through the vulva. This will prove that the trouble is not due to gases developed in the vagina, the repetitions within a short time being impossible if such were the cause.

Most authorities now agree that garrulitas vulvæ is produced by a laxness of the vaginal walls, and especially of the posterior wall, and also of the abdominal walls. While the skin of the perineum may be intact, it often has been ruptured at a previous confinement, and only the superficial tissues have been repaired. The condition is much more common in multiparæ than in nulliparæ. It is not so uncommon as usually believed; only the majority do not like to complain of the symptoms to their doctor. It is more common among the poorer classes

than among the more wealthy. Ordinary treatment, such as douches containing astringents, fail—the only cure being a close colpoperineorrhaphy. The posterior walls must be sewed up very tightly, with a large perineal body built up from bunching the vaginal mucous membrane over the levatores ani and transversi perinei which are carefully brought together by the Tait method of perineorrhaphy.

### COLORLESS IODINE

When patients object to the discoloration of skin produced by painting with tincture of iodine, as in the treatment of goiter, it is very easy to make colorless iodine, and make it instantly, without waiting a minute for the change:

Tincture of iodine ... 24.0 (drs. 7 )

Aqua ammonia..... 6.0 (drs. 1 1-2)

Carbolic acid..... 1.0 (drs. 10 to 12)

Shake well and wait just a moment and all color will be gone. The therapeutic value is not seriously affected.

### RETRODISPLACED GRAVID UTERUS

In a recent article Dr. C. W. Barrett, of Chicago, calls attention to the fact that with the onset of pregnancy a retrodisplaced uterus should be returned to normal position as soon as possible, and supervised during the early months of pregnancy. An irreducible retrodisplaced gravid uterus may be given time to raise out of the pelvis with growth if symptoms of early or late incarceration do not present. An irreducible retrodisplaced gravid uterus that shows early symptoms of incarceration which might lead to abortion (or late incarceration, with its attendant evils) should be replaced by means of a celiotomy; the complications should be dealt with, and a radical operation should be performed to permanently cure the retrodisplacement.

Cases of late incarceration may be met in which gangrene, septicemia, peritonitis, uremia, etc., may contraindicate celiotomy for replacement and in which drainage of the bladder, drainage of the peritoneum,

emptying of the uterus, or hysterectomy may be indicated. The latter cases, now uncommon, will be rare indeed if the former teaching is generally accepted. Careful celiotomy will seldom be the cause of abortion, but abortion will sometimes follow the operation as a result of the incarceration. This, instead of contraindicating an operation, points to the necessity of earlier operative measures. This earlier resort to operative treatment appeals to the judgment of the patient and the physician when it can be shown that a radical cure of the displacement and its complications is feasible.

#### UTERINE DEVIATIONS

Dr. Lucy Waite, Chief Surgeon of the Mary Thompson Hospital, Chicago, from an analysis of 3000 cases of uterine displacement reaches the following conclusions: (1) The normal position of the uterus is one of passive mobility, and a non-metritic, freely movable uterus may lie in any position in an otherwise normal pelvis without producing symptoms. (2) Uterine deviations are pathological and can be correctly designated displacements only when the uterus is permanently fixed in any given position or its normal mobility compromised. (3) When retrodeviation of the uterus is found in any given case of pelvic disturbances, further investigation will reveal complications which have produced the symptoms. (4) Diagnosis of uterine posi-

tions cannot be made from symptoms. (5) Menorrhagia, chronic backache, constipation and pelvic pain are in no sense classical symptoms of retrodeviations of the uterus, being found in a large percentage of cases of anteplaced uteri and are due to complications, regardless of the position of the uterus. (6) Dysmenorrhea, sterility and vesical irritation are not classical symptoms of ante flexion, as commonly taught, the dysmenorrhea and sterility being due to the accompanying myometritis, ovarian and oviductal irritation, to an accompanying cystitis, the bladder being involved in the general pelvic inflammation. (7) Many cases of dysmenorrhea are a pure neurosis, the accompanying flexion being only a coincidence, and gynecologists must extend their observations beyond the pelvis if they wish to discover the true etiology of many symptoms which manifest themselves most prominently, it may be, in the pelvis. (8) The principal factor in the causation of fixation of the uterus is the peritoneal perigenital adhesions. The uterus may be fixed also as regards the relative position of the body and cervix, by inflammation of its own tissues, myometritis. (9) The rational treatment in any given case is to treat the complications which are in reality responsible for the symptoms, leaving the liberated uterus in its original state of anatomical and physiological mobility. (10) Fixation of the uterus by surgical intervention is therefore only substituting one pathological condition for another.

## GENITOURINARY THERAPEUTICS

#### TREATMENT OF NASAL SYPHILIS

After referring to the importance of a direct diagnosis of nasal syphilis, Dr. M. C. Morris states that to check promptly the progress of the disease, whose destructive ravages have such an important influence on the entire future life of the patient, internal treatment alone is not sufficient; local appli-

cations to the nose and inunctions of mercury to the body are necessary. The oleate of mercury should be applied to the thinner parts of the skin, in various parts of the body. The nasal organ should be cleared of the contained crusts at least a half hour being taken for this one task. Using a soft-rubber bulb syringe or a Birmingham douche, the crusts should be thoroughly

soaked with Dobell's solution. When the crusts have become soft they may be removed with angular forceps. After all the large crusts have disappeared the small crusts, and any dried secretion or mucus, may be removed with a cotton applicator. Then a careful search for any denuded or loosened bone should be made. After cocainizing, probe the nose and detach and extract any loosened bone. If the sequestrum is too large to remove, it may be crushed with forceps. After the above treatment the inflammation will rapidly subside. Any remaining particles of pus are destroyed by hydrogen peroxide, upon a cotton applicator. Then an application of 1 dram of silver nitrate to 1 ounce of water should be made, the whole ulcerated area being attacked. Complete the dressing with the insufflation of an iodoform mixture as follows:

Morphine sulphate.....grs. 2  
Iodoform .....grs. 30  
Tannic acid.....grs. 30  
Bismuth subnitrate.....drs. 2  
Acacia .....drs. 2

The patient should be directed to syringe the nose constantly—twenty to thirty times daily—with Dobell's solution, and should be treated daily for several days as above if a permanent cure is expected.

#### A CASE OF GONORRHEAL OTITIS

Dr. Reinhard reports a case in an infant twenty-four days old. The child had blennorrhea neonatorum and also a severe purulent discharge from the right ear. The discharge showed gonococci both microscopically and in culture. The nose and pharynx were free. Treatment with dry powders had no effect, but irrigations with a 1:5000 potassium permanganate solution, followed by instillations of a 1-percent protargol solution, brought about a complete cure in a few days.

#### INTERNAL TREATMENT OF SKIN DISEASES

Dr. W. R. Dalton (*J. A. M. A.*) is convinced that hyperacidity, induced by faulty digestion and intestinal fermentation, is the

sole cause of a great many skin diseases. While he uses local treatment in every case, he uses it simply as a palliative to relieve distressing symptoms and does not rely upon it as formerly. His chief reliance is on internal treatment, and the combination that gave him the most excellent results is as follows:

Naphtalin .....gr. 1  
Ipecac .....gr. 1  
Charcoal .....grs. 1-2  
Arsenous acid.....gr. 1-100  
Calomel .....gr. 1-100  
Strychnine .....gr. 1-100  
Pilocarpine .....gr. 1-100

The naphtalin and charcoal are antiseptics and inhibit the action of microorganisms through the ileum and large intestine; the calomel, whether a cholagog or not, destroys the bacterial forms in the duodenum and jejunum; the pilocarpine and ipecac exert their action upon the sweat-glands and lymphatics, while the strychnine acts as a tonic to the vasomotors and the whole cutaneous nervous system. Constipation must also be combated, so the author generally follows the tablets by magnesium sulphate, lithium carbonate and sodium phosphate in an effervescent form, in the morning.

#### VENEREAL PROPYLAXIS

Social "purists" declaim against anything in the way of public discussion of sexual subjects. Yet the widespread disaster from gonorrhea (not to mention syphilis) with its alarming influence on diminution of the birth-rate must make all thoughtful physicians agree with Dr. Denslow Lewis, of Chicago, who declares that the time has come for general instruction of the public as to the rational prophylaxis of venereal disease. Much of this instruction must be given by the physician; and fortunately several of the great medical societies have become enough awake to this matter to appoint committees for devising means for this public education.

Professional as well as lay sentiment must be created which will allow of and demand

such instruction in the daily press, which has always refused to consider such articles as publishable. The rules of the post-office department as to the transmission of "obscene literature" by the mails are so inexact and so contradictory that it is difficult to transmit such information without being arrested and fined as a sender of "obscene literature"—however pure its object may be. These laws should be amended so as to make it possible for responsible physicians to transmit and publish such information without danger of being held responsible to the postoffice authorities.

Some may question Dr. Lewis's declaration that there should be some sort of registration and examination of prostitutes, not the European system of legalization, but such a system as shall oblige the examination of prostitutes by the proper authorities so as to prevent them from propagating venereal disease, but no practitioner of much experience can dispute the necessity of some sort of restriction. We must teach the hygiene of sexual life to children and to parents. Thus, abortion, illegitimacy, and infanticide, as well as venereal disease, will be limited. Every school should teach it by means of properly instructed teachers or physicians. Prophylaxis in children should be favored by the removal of all sources of irritation about the genitals. The boy and girl as well should know the truth about sexual matters, and not learn it in a garbled way from associates. Women's clubs, secret societies, and gatherings of women are appropriate places for the instruction of parents.

#### GONORRHEAL EPIDIDYMITIS

According to Edwards the treatment of epididymitis is the easiest of all the complications of gonorrhea. The severity of the symptoms depends in great part upon the patient himself: The nervous and high-strung patient will of necessity need more attention than his brother who is stoical and bears his pain philosophically. Absolute

rest in bed is the first indication both for the comfort of the patient and to prevent irritation which might lead to suppuration or tuberculosis of the testicle. A brisk cathartic should be given, preferably 5 or 10 grains of calomel, followed by Abbott's saline laxative.

The affected testicle is to be put at rest. Several methods have been proposed, but the most convenient is a roll of ordinary cotton placed snugly between the thighs; though a good way is to apply a wide strap of adhesive plaster and suspend the testicle on this, but these are liable to become cumbersome and uncomfortable. After the scrotum is properly elevated, hot applications are to be made, preferably with cloths saturated in hot water, to which may be added tincture of opium and Goulard's extract, all covered by gutta-percha or oiled silk. A hot-water-bottle will keep the applications hot for some time. A tobacco poultice, made by adding 1 1-2 ounces of fine-cut tobacco to a pint of hot water and flaxseed, quantity sufficient to make a thick paste, will sometimes give relief, especially to those who are not tobacco users.

For the extreme restlessness and sleeplessness nothing better can be used than opium in some form, preferably codeine, 1 1-2 grains, with acetphenetidin, 5 grains; one of these powders can be given every three hours. The hot applications should be kept up for four or five days, after which guaiacol may be applied in the shape of the following ointment as proposed by Casper:

Ichthyol.....	2.5
Guaiacol.....	5.0
Mercurial ointment.....	10.0
Petrolatum,	
Wool-fat, aa. q. s. to make..	600.0

The ointment is to be applied on gauze and then covered with nonabsorbent cotton. This may be continued for a day or two, when the patient is allowed to leave his bed after having been fitted with a proper suspensory.







# GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



## MASSIVE AND ALKALOMETRIC DOSES

The theory of the large as compared with the small  
frequently repeated dose, with the advantages of  
the latter explained from a new point of view

**A**N objection is frequently brought against the dosimetric method which at first sight seems well taken. It is said that "this system" renounces the effect of the massive dose. The large dose given at long intervals has an effect which feeble doses at short intervals have not, and this is true even when the sum of the doses given dosimetrically in the same unit of time equals or even exceeds the total of ordinary doses."

I say "ordinary" and not "allopathic" intentionally because this last term does not deserve to have a place in the contemporary scientific vocabulary. What is really an allopathic dose? Etymologically it means a dose capable of producing a disease other than the one which one desires to combat. But does this concept correspond to fact? When I give digitalin to a pneumonia patient, or a salicylate to a rheumatic, or mercury to a luetic, or caffeine to an asthenic, have I then the intention to produce an anti-rheumatism, an antipneumonia, an anti-syphilis? Not at all! I simply modify favorably the circulation of the blood or the influence of the nervous system, or I paralyze or kill the spirochetæ, that is all, and I am not on that account a pathogenic manufacturer. This word "allopathy" is a concession made to homeopathy. But to oppose one doctrine against another is equal to recognizing the latter.

There is only one medical practice, and that is based on observation and experience, the only source of truth and of all science, as Poincaré has said. The word "allopathy" corresponds to nothing, and it has its place only on the signboard of the drug-shop to say antithetically that it is not a homeopathic one. This word is repudiated by scientific medicine, and it has only one use, to recall the worst time of the lamentable crisis which medicine has had to pass through. This evil memory antedates Burggræve, Pasteur, Claude Bernard, Roux, Behring, and all the rest of experimenting physicians. Why then burden science any longer with a name that has, thank God, no merits, and why retain it in our writings?

The objection referred to above has turned away many a physician from alkaloidotherapy. And yet this fact of renouncing the effect of the massive dose is precisely that which confers upon our method its security and charm. It is just this that I desire to show here, and to do which it is necessary to recall to mind the affects of massive doses physicochemically considered.

The molecules of a substance which are dissolved in a solvent conform to the kinetic theory of gases. The atoms and the molecules which constitute the gases are separated from one another and move in straight lines. In a gas at rest, that is in equilibrium, all the molecules and all the directions of the

movements which animate them are uniformly distributed in the space in which they are disposed. The molecules making up a volume cannot, therefore, move in a more diversified way without clashing. These clashings must modify continually and ceaselessly the directions which the molecules follow. That such modifications may not disturb the equilibrium of the gas it becomes necessary that the speed of the motion impressed on each molecule do not change. For this it suffices that each molecule preserve intact both its energy and its center of gravity.

All the molecules which strike the walls of their container are started back again by these walls. The impact exercised by the molecules on the sides of the vessel constitutes the pressure of the gas. The molecules which strike mutually against each other in the gas itself only change their speed without losing any of their energy. If this were not the case, if the impacts did not happen with perfect elasticity, then the energy lost by the molecules would be transformed into heat. This last might be possible, but it never was observed.

The speeds which animate the molecules vary much, but the result, their sum, remains always the same, in conformity with the hypothesis mentioned above.

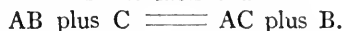
The substances dissolved conform exactly to the kinetic theory of gases. The pressure which they exercise on the sides of their container constitute the osmotic pressure, and the movements of their molecules explain exactly that which is called "affinity" in this way:

Let two bodies, AB and C, in solution (*corpora non agunt nisi soluta*: bodies do not act unless they are dissolved) act upon each other according to the equation: AB plus C equals AC plus B (1).

At the same moment when AB and C are put in the presence of each other the masses of AB and C are very great, while those of AC and B are very small. In proportion as the reaction is being accomplished the masses of AB and B go on augmenting at the expense of the masses AB and C. The result of this fact is that the tendency of

AB and of C to react upon each other goes on without ceasing or diminishing. Simultaneously AC and B endeavor continually to decompose each other according to the equation: AC plus B equals AB plus C.

We have thus before us two distinct phenomena, expressed respectively by the equations (1) and (2). The notation introduced by Van 't Hoff allows us to express these two distinct facts thus:



We have seen that the two dissolved bodies conform to the kinetic theory of gases, their molecules move, therefore, without ceasing. In order that the molecules should react upon each other it is necessary that they should reciprocally collide against each other. And the number of collisions producing this reaction will increase with the number of molecules contained in a given unit of volume. This number of collisions is therefore directly proportional to the concentration of the solution, i. e., with the mass of active bodies contained in a unit of volume. And the speed also with which the reaction is accomplished is proportional to the mass. *The mass, therefore, governs both the affinity and the promptitude of the chemical action.*

It results from all these, for instance, that the force of an acid is directly proportional to the number of negative H ions contained in a volume unit, and again, the force of a base is also directly proportional to the number of positive OH groups (hydroxyl ion) contained in a volume unit.

It is evident that in order that the effects of the mass may be produced it is necessary that the bodies in the presence of each other should be dissolved and uniformly distributed in the solvent. And now, the alkaloids that are dissolved in the blood-plasma are at first fixed provisionally by the lecithins of the blood-corpuscles, then the latter transfer these alkaloids to the blood-cells which abstract from the blood by a sort of election just those bodies which are suitable for their groups of fixators.

The actions of the mass due to the molecular collisions, the formula of which could be expressed mathematically, are in no way comparable with the vital phenomena of

cellular absorption. The simple fact that the cells in question are fixed takes away any value that might be derived from comparing the two processes. Recalling the objection which was referred to in the beginning of this article, we see then that it is without foundation and importance. Alkalometry does not renounce any useful action in passing by mass-action, rather the contrary, for in doing so it acquires more security, and for this reason: The absorption of an alkaloid by fixed cells is continuous. In analytic geometry this would be expressed by a straight line. The passage of an alkaloid from the gastrointestinal tube into the blood occurs rapidly, say in ten or twenty minutes. This phenomenon could be expressed by a sinusoidal line, i. e., a wave-line on an axis. Straight and sinusoidal symbolize two simultaneous phenomena, as the illustrations graphically represent.

FIGURE I

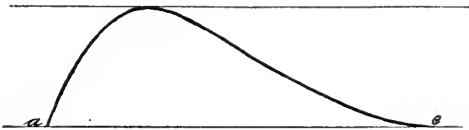


Figure I may represent the action of a massive dose at long intervals. The line AB represents the sudden powerful action of the massive dose starting at the base A and reaching its acme at B to perhaps an undesirable toxic effect, and then slowly descending from the acme at B and reaching to its minimum or nil effect at C. At C the process will again have to be repeated with the same unequal effect upon the patient.

FIGURE II



Figure II represents by a similarly shaped but shallower curve the effect of the minimum dose administered at short intervals. Starting at A the effect of the dose is reached at B, and thence the effect begins to diminish and would have reached its minimum or nil effect at C, but the next dose given at D crosses the line BC at E, and there its effect strengthens the effect from the first dose and reaches its own acme at B; and so the minimum doses represented by the repeated curves sum up till the desired therapeutic effect is obtained. The doses and the intervals being the same, we may represent by the lines FG at the acmes and HI through the intersections as continuous uniform lines of action till the desired effect is obtained and the remedy ceases to be given.

Fig. I shows that the quantity of alkaloids which is taken up in the torrent of the circulation varies a great deal with the large dose at long intervals at a given time. This variation is far less with the small dose at frequent intervals because the line which ex-

presses it is a sinusoidal one of very slight elevations and of small distances one from the other. This concentrated quantity of the massive dose puts the fixed cells under the liability of a too great absorption at one given period, and of a too feeble absorption at another given period of time, an absorption which is capable of producing an inhibition or even bring on 'definite intoxication. [My friend, Dr. Paxton, contributes the illustrations for this article.—THE GLEANER.]

Experience confirms what was said above. In alkaloidotherapy the massive dose does mischief and discredits our method, while the feeble dose at continual thrusts gives always invaluable services, and this is just what we want. "Gray are all theories, my friend, dull and empty," said Goethe, "experience alone is a star full of life."—(Dr. Robert Tissot, in *La Dosimetrie*, Oct. 1907.)

#### CALOMEL: WHAT BECOMES OF IT AFTER INTERNAL ADMINISTRATION

M. H. Nemser reports the results of his observation, in the *Chemische Zeitung* of 1906, as follows: In its progress through the gastrointestinal canal calomel is dissolved in various proportions in different places. The gastric juice and contents showed themselves as least effective and this despite the free acid present in the stomach. The solvent action begins strongly in the duodenum and reaches its maximum in the ileum. In the colon the dissolved mercury is either absorbed or the mercury is precipitated from it by the hydrogen sulphide present in the colon, so that no dissolved mercury is found in the colon. The absorption of the mercury begins in the ileum, and is completed most likely in the upper portions of the colon. A considerable portion of the ingested calomel is retained for a long time in the liver, kidneys and colon, a fact which is not without significance. The said organs show a specific affinity for calomel, which affinity is observable in the stimulation it produces to increased functional actions.

The calomel 'taken into the stomach does not therefore pass out completely with

the feces, but remains in the organism in part, and is the cause of its specific action.  
—*Pharmac. Centralh.*, No. 24, 1907.

### PHYSOSTIGMINE

An alkaloid derived from the African calabar, or ordeal bean, which is the seed of the *Physostigma venenosum*. It is also called eserine. It is of a very complex composition, and its salts are easily decomposed in a watery solution, developing a red color. It is an intense poison. Its effect extends first to the many organs that are provided with smooth and striated muscular fibers, and also to certain glandular organs, all of which this poison generally irritates. Formerly it was thought that the irritation affected the muscular fibers themselves, but at present there is an inclination to regard the irritation of the poison as affecting the terminal distribution of the nerve-fibers to the muscles and glands. It is not definitely settled whether the beautiful crystals of physostigmine salicylate of the pharmacopeias are identical with the original physostigmine that was obtainable only in an amorphous combination.

The effects of physostigmine, especially that prominent stimulating effect which it has upon the heart-muscle, would make it excellently available for medicinal purposes were it not that it has at the same time an exceedingly violent effect upon the central nervous system which is eminently perilous to life. For this reason the remedy is at present limited almost wholly to external use, while formerly the unreliable extractive preparation from the bean was used internally, as for instance in tetanus neonatorum.

The remedy is of great value for the eye specialist as a miotic which by repeated instillations contracts the pupil even when moderately under the dilating influence of atropine. It is also useful in tearing up posterior synechia, also to prevent prolapse of the iris or to reduce it when prolapsed, which may happen in operations on the eye. The most important services of physostig-

mine is in glaucoma, for its power of contracting dilated blood-vessels can be used in that disease to reduce the internal pressure of the eyeball by contracting its dilated blood-vessels and thus save the eye in many instances. The use made of the remedy is external only, also in poisoning with atropine and similarly acting alkaloids.

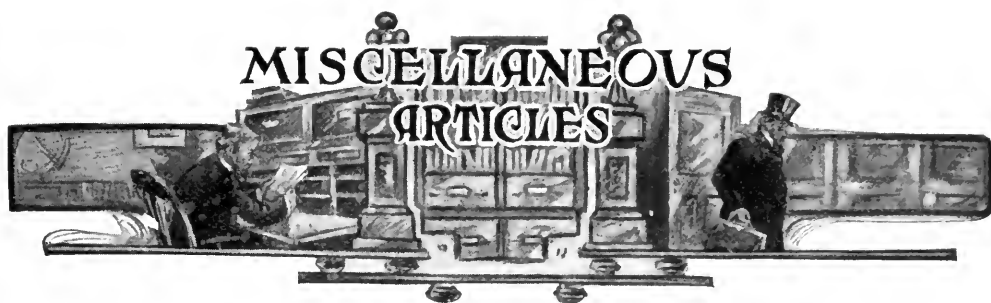
Physostigmine salicylate consists of colorless or yellowish, glistening, small crystals which are soluble in water, the solution becoming reddish after some hours and losing in efficacy, hence must not be kept too long. It is used for instillation into the eyes. (1 : 500 up to 200 parts of water.) Maximal internal dose is from one to three milligrams (0.001 to 0.003), and for children from 1-40 to 1-20 of a milligram (0.00025 to 0.0005).

Physostigmine sulphate is more soluble in water, not distinctly crystallized, and is used mostly in veterinary practice.

*Physostigmine Poisoning.*—Since the use of the remedy became more limited to external applications the poisoning accidents with it are rarely met with now, either in medical practice or otherwise. Yet caution should be observed in its external use as well, for absorption is not excluded. A few milligrams in an adult, and half a milligram in a child, can have bad consequences. The first toxic phenomena, apart from pupillary contraction from local application consist in an increase of secretions, vomiting, diarrhea, intestinal spasm, colics, tenesmus, cardiac palpitation, slowed pulse, then also violent muscular twitchings, spasms, psychic excitement, dyspnea, etc., and finally paralysis of respiration.

The treatment, apart from the exhibition of evacuants, has to be directed to artificial respiration or oxygen inhalation. As an antidote atropine hypodermically and in not too small doses is recommended, which however cannot be designated as a perfect antidote to physostigmine. Muscular cramp can be stopped with curare, but the danger is in impairing the breathing.—(Harnack, "Enzyklopaedie der Praktischen Medizin.")





## FACTS CONCERNING BOWEL DISINFECTION

Some essential, fundamental things, which too often are overlooked, and which are worthy of repetition and emphasis. The importance of disinfecting the stool and how to do it most effectively

**T**HERE are several points which we wish to reiterate to our readers on the subject of disinfecting the alimentary canal. The first is that it is simply preposterous to attempt to do this with any chemical disinfectant so long as the bowel is occupied by decomposing fecal masses. No known agent that could possibly be employed here would permeate these masses and destroy the microorganisms or neutralize the toxins which they contain. It is therefore absolutely necessary to first empty the bowels; and so long as this is not done, so long as a single fecal mass remains enpouched somewhere along the large intestine, it will be impossible to accomplish our object. Let us begin therefore by attending to this matter, and attending to it thoroughly.

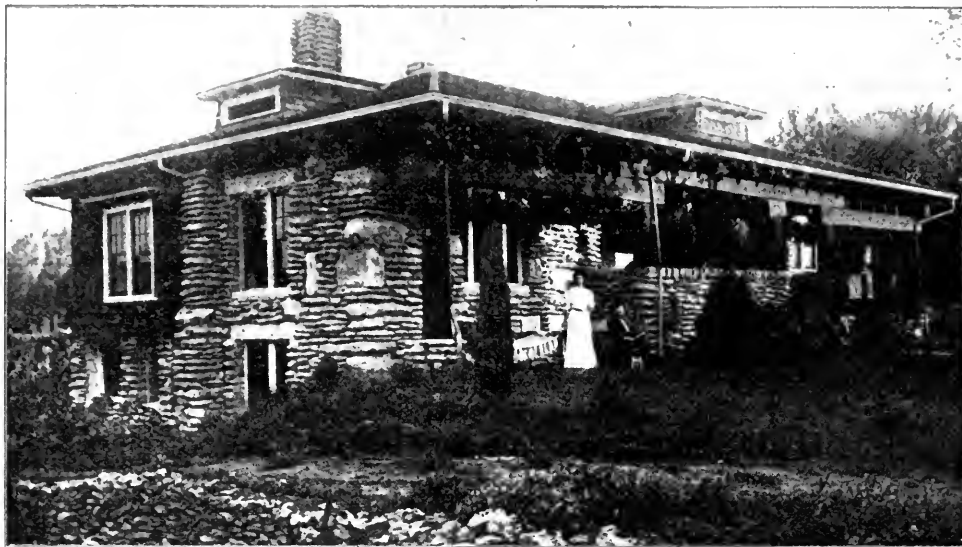
This being done we may then begin to give the "intestinal antiseptics" in suitable doses, say from five to ten grains every one, two, three or four hours according to the urgency of the case. How long should this be continued? We ourselves have inadvertently stated, "until the stools are inodorous;" but on its face this is a mistake. Normal stools are never inodorous. Abnormal stools are abnormally offensive. The remedy should be continued until odor is reduced to what may be considered normal.

When the "intestinal antiseptic" (W-A) is employed we may utilize Bouchard's acute

observation. The bismuth these tablets contain will continue to form bismuth sulphide and blacken the stools, so long as the sulphides are present in the alimentary canal. When the disinfection is complete and the sulphides are no longer formed there, the blackening will cease. This was Bouchard's suggestion which we have utilized, all the more since the small quantity of bismuth salicylate present helps to make these tablets still less irritating to the stomach, although even without this ingredient the perfection of our sulphocarbolates is so great that the irritation is exceedingly small. But before blackening ceases it will be found that, with much smaller doses than are necessary for this purpose, the abnormal odor has disappeared and we have simply the odor of a healthy stool.

This is quite sufficient: there seems to be no reason for pushing the administration beyond this point, unless it may be thought proper after bacteriologic examination of the stools has been made and it is found that the microorganisms which we wish to get rid of persist. For instance, in a case of amebic infection of the bowels we may find that the amebæ are diminished but not entirely banished by the sulphocarbolates. In this case we may, with propriety, push these agents until the amebæ completely disappear.

The same holds good in regard to the typhoid bacilli, although there may be a re-



AN OTTAWA, KANSAS, BUNGALOW

The home, not of one doctor, but of two, Drs. George W. and Josephine Davis—and of "Orpha Elizabeth"

infection of the bowels when these bacilli with increased virulence descend from the gall-bladder into the duodenum.

We would urge upon our readers particularly the importance of frequent bacteriologic examinations of the stools. The profession has pretty fairly learned the lesson of examining the urine, but as yet examinations of the feces are the rare exception. Our own rather extensive experience in this matter, however, has shown us that in a large number of instances we have obtained from this examination information in regard to the nature of disease and its progress which could not have been supplied in any other manner, excepting by that inference from the symptoms of the patient, which may or may not be correct. While we acknowledge that the skilful physician may be as a rule correctly guided by such inferences, it is never right to depend on such information when more exact data can be secured at the expense of, rather troublesome, it is true, methods of examination.

Nevertheless it is just such troubles that our patients pay us for (or should), and expect us to take, and although the examination of stools is by no means a pleasant occupa-

tion, if our patients' welfare demands it, they should be made.

While we thus insist upon the importance of the laboratory work in the conduct of serious cases, we would interject here a warning against the habit of too exclusive dependence upon it. For instance, suppose we have a case of suspected typhoid fever; it may require a week or more before the laboratory will verify our diagnosis by means of a Widal test. It would be absurd, however, for us to wait until this is done. If we do so, the proper time for medicating the patient effectively has been lost, and we have before us no longer the hope of aborting the disease, but simply that of conducting it, if possible, to a favorable finish; and even this hope has been greatly lessened by the long time during which the disease has been allowed to run wild.

As the disinfection of the alimentary canal by means of the sulphocarbolates is practically a harmless thing, we believe that it is good practice to empty the bowels and disinfect them in this manner as soon as we suspect anything like such an infection as that of the typhoid bacilli. Most physicians who adopt this suggestion report to us that

they have numerous cases which they are really unable to diagnose. They look to them in the first place like typhoid fever, and the older physician was accustomed to say that the patient was developing this malady. But after the bowels have been cleared and disinfected the symptoms subside so rapidly that we are constrained to believe that either the diagnosis was a mistake, and it was simply a case of fecal toxemia, or else that a true typhoid was aborted. In some instances an examination of the blood may detect the typhoid bacilli, but few active practitioners have the time to do such work in their busy practice, and comparatively few patients are willing to pay to have such work done, when they have within a few days recovered from the threatening illness and are ready to return to their duties. Push the sulphocarbolates. In case of doubt even, not harm but invariably good comes from the clean-out, clean-up and keep-clean process thoroughly applied and pushed to effect—a well-digested, consistent, *normal-smelling* stool.

W. C. ABBOTT.

Chicago, Ill.

### GETTING THE MOST OUT OF LIFE

Anyone who looks at the pictures in this and preceding numbers of *CLINICAL MEDICINE* must be impressed with the *pleasantness* of the doctor's life. With all of the anxiety, hard work (and there is no profession that has more of it) and uncertainties of our profession, it certainly has its compensations. And first of these, in the editor's opinion, is the home. The doctor generally loves and appreciates his home and desires to make it attractive; and if he has the kind of a helpmate he should have his home is a pleasant abiding place. In proof we need only to refer you to our "picture gallery."

One of the very nicest of doctor's homes you will find illustrated in this number. The only reason that we can see why this home should be more attractive than that of lots of others is because it is occupied by *two* doctors instead of one—Drs. George

W. Davis and Dr. Josephine Davis of Ottawa, Kansas, a doctor and a doctor-wife. Their beautiful bungalow is a delight to the eye and a satisfaction to the soul. If you don't believe it look at the pictures.

That's the way we felt about it when we received a picture (see opposite page) from Dr. Davis (G. W.) back in December. So we wrote him, on December 17, and in reply we got a line, noted on our letter of the same date, saying: "This day arrived Orpha Elizabeth to live with us in our bungalow." Now we know that he has a *real* home—something only possible when there are children in it, to love and be loved, to plan for and to work for.

The exterior of the Drs. Davis's bungalow is satisfying. The interior views show



A nook in the living room of Dr. Davis's bungalow

that it is delightful throughout. On the first, or main, floor are the living rooms; on the basement floor are the kitchen, laundry, and—not least important—the "equine department," as the doctor calls it. His horses are certainly housed like the aristocrats they undoubtedly are. (We ought to have their pictures!) The stables,

as will be noted, are of concrete; on the side of the stall shown in the picture there is a biblical motto, "And there went out another horse."



Concrete Stalls in Equine Department of the Bungalow

Some idea of the living rooms may be formed by the "corners" shown of the living and dining rooms; the latter is furnished with thirty-six plate glass mirrors. Over the fireplace in the living room, on a slab of Carthage graystone, is cut the following legend:

"O turn thy rudder hitherward awhile,  
Here may ye storme-bett vessel safelie ryde.  
This is the Porte of res from Troublous toyle—  
Ye worlde's sweate Inn from painse and wearisome Turmoyle."

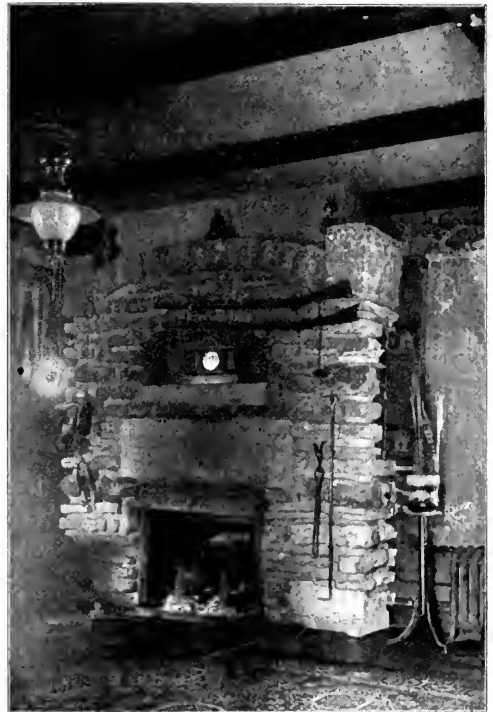
Doesn't that describe the doctor's home, as it should be?

There are other beautiful homes illustrated in this number. Take for instance that place of Dr. Tafel at Phoenix, Arizona. We have only one fault to find with it—and that is, that we know so little about it to tell you. The doctor is culpable because he did not write us "all the story." He says, "My home is the only place to live in during the winter." We can well believe him, for many a doctor can say that. *Our* home isn't a bad place, summer or winter. So next time tell us more.

Doctor, get all you can out of life. If you haven't a home of your own, commence planning to have one *now*. Gather the

family around the library table and commence to make your plans for the handiest, most homelike, most beautiful, the most really lovable place that you and wife can "fix up." Get a corner for your office, either in the house itself or somewhere in the yard—and make that office of yours help to "pay the freight." Buy good furniture, all the necessities and some of the luxuries, have a good horse, a good buggy, one that will be handy for the family, an automobile if you can afford it, pictures, music and magazines, books for the whole family. Surround yourself and fill your home with things which are stimulating to the intellectual

life; which will make you a better, a keener,



Fireplace in the Living Room



a more successful man, and which will give the children a taste for things which lead up rather than down, and make their home a place to come back to with grateful hearts.

Tell us of your home. Send in the pictures. CLINICAL MEDICINE aspires to help

ficult to get warm; constipation, furred tongue and loss of appetite. The next day these symptoms continued, with tenderness in the right iliac region and a temperature of 103.2°F.

There was no Widal test made, but on the seventh day of the disease the rose-rash of



A CORNER OF THE DR. DAVIS'S (OR MRS. DAVIS'S) DINING ROOM  
This beautiful room has thirty-six plate glass mirrors around its walls

the doctor to be a happier as well as a more successful man. Let's all help to that end.

### DIET IN TYPHOID FEVER

Ulceration in typhoid fever begins at the end of the first week. If proper treatment is begun prior to this occurrence the disease can be aborted. Not so when these lesions have formed. This shows the necessity of making an early diagnosis.

I have recently had an attack of typhoid fever and was my own physician, my wife acting as nurse. On Oct. 2, 1907, the symptoms began as follows: Dull headache, involving the whole head, severe aching of legs and hips; persistent rigors, it being very dif-

typhoid appeared, eighteen spots being counted on the trunk of the body. Moreover, I have just treated nine cases of fever in this vicinity and in most of them the rash was in evidence. Thus I felt sure of my diagnosis.

As to treatment: I began on the second day of the attack to clear the bowels; used calomel, podophyllin and saline laxative, also enemas of soapy water daily and every second day half a pint of saturated solution of salt in cold water. These measures were kept up for about five days till the bowels were clean.

As an intestinal antiseptic and while the fever lasted I took 5 grains of zinc sulphocarbolate in solution every two hours. As

to diet: Nature does not call for forced feeding in this disease. The appetite is nil. This I know now from experience. I fasted by preference the first forty-eight hours, taking only boiled water. Then as a diet I selected a food that leaves almost no residue—predigested beef (Mulford's). This was taken every three to six hours, as occasion might demand, and used exclusively until the tongue cleared. Other liquid foods were then taken, but no solids until the temperature had been normal for ten days.

It is commonly taught that you should feed liberally, in typhoid fever, with milk, gruels and other liquid foods; but it is only adding effete material to the bowels, which favors the multiplication of the typhoid bacillus.

Under the above treatment the temperature, headache and all other symptoms gradu-

tremors, dry brown tongue or muttering delirium, as described in works on practice.

But after all, what is stated above is simply in keeping with "clean out, clean up and keep clean," as taught in "The Alkaloidal Digest."

C. C. VAN WATERS.

Rensselaer Falls, N. Y.

[Right you are, Brother!—ED.]

### KEEP A STOCK OF DRUGS; DISPENSE THEM YOURSELF

Several years ago, when starting in practice, an old doctor told me: "Dispense your own drugs, carry a good stock of them for your patients, and remember, the druggist is the worst enemy the doctor has."

At that time, the old physician's advice sounded like the cranky talk of an old sore-headed man; at this time, in the present year of grace, it comes up to me "fresh as green boughs of yesterday"—the truth.

Get you a good, well-selected stock of drugs, the kind you want, mix in a goodly supply of the alkaloids, supply each and every patient, write no prescriptions, and it will make for your success, financially and professionally. Mr Druggist, his family and friends will not have their noses in your business, neither will your

prescriptions be sent in and refilled after you are dead! Yes, after you are dead. Many such instances are known.

A man came to me the other day to get a foot-dusting powder, a good one. Said he: "I'll bet I've cured twenty fellers with this prescription. I got it from Doctor Blank, eight years ago." I didn't furnish him with the ingredients, as I was out of them at the time, but I thank (?) Dr. Blank for "knocking" me two dollars' worth.



Christmas Day in Phoenix—Residence of Dr. Tafel

ally abated, until on the sixth day the temperature was normal, both morning and evening, and remained either normal or subnormal thereafter.

By cleansing out the alimentary canal and giving a limited diet, which leaves almost no residue, it is easy to keep it clean. Then the zinc sulphocarbolate or W-A intestinal antiseptic will be all the medication required.

With the treatment as above outlined there is scarcely any tympanites, no muscular

How about the other nineteen or twenty refills?

Doctor, every time you write a prescription you are taking money out of your pocket and very often sending your patient to some substituter.

My friend, the late scholarly Dr. C. E. Boynton, told us something for us to remember, among his "Don'ts." It is this: "Don't tell your patients what you are giving them."

I beg of you, my brethren, take the second squint at this little article and "forget it not, forget it not."

ARIZONA DOCTOR

#### HIS DEVOTION TO ALKALOIDAL THERAPY GROWS WITH THE YEAR

My devotion to the principles of alkaloidal medication grows every year and while I have lost the enthusiasm of youth, I still have the confidence born of sure results. We "of the true faith" owe more to Dr. Abbott than to any other man in America for his energy, his enthusiasm and his courage in insisting on certain *real* facts which were ignored by the medical profession, but which have become corner stones of medical history even in their brief period. Long life to THE AMERICAN JOURNAL OF CLINICAL MEDICINE, and may its future be as prosperous as its past has been helpful!

W. L. JOHNSON.

Uxbridge, Mass.

[How we rejoice in friends like Dr. Johnson, who have ever urged us on to greater endeavor, and fortified our purposes by their many, many kind words of appreciation!—ED.]

#### SHALL WE "LET NATURE HAVE HER COURSE?"

While I am not one of the "big guns" I have had a fair share of work in the practice of my profession. I am not an enthusiast, nor am I a fanatic, but I think I know a good thing when I see it and have given it a fair trial. This I have done with many

of the alkaloids. I take them up and study them separately—familiarizing myself with one at a time. I try to "prove all things and hold fast that which is good."

Your "clean-out, clean-up, and keep-clean" theory has been my motto since I have been in the practice of medicine, and I have never had cause to regret adopting it. When visiting a patient I first "clean him up," externally and internally—and keep it up "eternally," and by this method I seldom fail to give great relief and secure better results than could possibly be obtained without unloading the bowel of its contents, which can but poison the system. I find the "dose enough" and "to effect" to be the best way, in my hands, to accomplish results.

I am aware that I am "cussed" by a great many of the older men in the profession, but in the seven years of active practice I have learned to think just a little for myself. Of course I read some ten of the best journals that are published, which, you know, include *The Journal of the American Medical Association* and THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

I am fully aware of the fact that I treat but few cases of pneumonia, not averaging more than six or eight per year in a practice of \$2500 to \$3000 yearly and in more than 200 families. And this is the way it goes: Mr. K. is taken suddenly ill with all the symptoms of pneumonia. I go at once and give him the proper treatment at the proper time, and in two or three days he is out and about his business. Mr. K. had no pneumonia! See the point? Old doctor's word for it, to be sure, without waiting for them to skin me.

Mr. B. is taken suddenly ill just as Mr. K., with all the symptoms of pneumonia, but instead of sending for a doctor he takes a few fever powders and waits a day or two; then I or someone else goes and, lo and behold! he has pneumonia. Why? Because he runs the regular course and "gives up the ghost." Yes, he had pneumonia! They will all say so. And I have been told so often and in such positive terms that pneu-

monia is a self-limited disease, that notwithstanding I have to deal with all the symptoms, to start in with, I can never know "for sure" that it is pneumonia until the patient is wrapped in his shroud and laid to rest, as are most of those who "have pneumonia."

It is time for us to wake up and do something for our patients. Each is a law unto himself, and each doctor should study each of his patients and treat him just as the case demands—not as Dr. "Big Gun" treated his patients fifteen years ago when he was preparing his book, which we are to gulp down as "authority" just because "HE" says so. If this is the way we are to treat our patients, let's get down and out and let some real doctor come in and fill the place we have been keeping vacant—so far as a *doctor* is concerned.

I know what this is going to do for me; but I have my own work and the experience of many other doctors to establish the cause for which this article is written—the greater study of our cases as they come, more active and more early interference in behalf of our patients, and the advancement of that most woefully neglected branch of medicine, therapeutics, without which medicine is a failure, many "authorities" to the contrary notwithstanding.

If this paper does nothing else, it will call forth criticism from many of the "let-nature-have-her-course" doctors, which will cause both them and myself to read more and study more, and thereby increase our knowledge of medicine, all of which will be for the bettering of mankind. And if this I do, I shall be more than satisfied. My only aim in medicine is to try to get on a plane where I can do the most for my patients in the least time possible.

S. S. WIDENER.

Stratford, I. T.

[There is no more encouraging "sign of the times" than that the number of physicians who *individualize* their cases is increasing. The necessity for knowing disease, knowing the processes and vagaries of the human body in sickness and health and

how to recognize them and differentiate one from the other is growing constantly greater; don't think for a moment that we minimize the importance of knowing all there is to know about this department of medicine. But why should the physician spend much time on the refinements of diagnosis—and then turn to Osler's "Practice" for the "treatment," which too often he accepts unthinkingly and unquestioningly? That's what we deplore—what we want to get away from. Let us seek to adapt our remedies, *in every case*, to the ends to be accomplished in that case. That's the only truly "scientific" way of practising medicine.—ED.]

#### THE DOCTOR'S HORSE

We wonder why none of our versifiers has tried his hand on this subject. Certainly it is worthy of the best the medical poet can do. Who will volunteer something on this theme?

But in lieu of the poem we have a picture to submit which tells its own story. "Faithful Charlie" belongs to Dr. T. A. E. Evans of Farmers, Kentucky, and so do the lusty "little alkaloidists" who are "taken" on Charlie's back—riding him to the barnyard. Dr. Evans has no use for the automobile. When Charlie is not in service for the doctor, the doctor's wife and the little ones always find him ready. Then, as the doctor says: "With the faithful horse and the 'cracker-jack' case the practice of medicine is made easy and with the bright faces of the little ones and the generalship of the faithful mother the home is made happy and the world is good to be in." And so it is!

#### THE POST-GRADUATE IDEA IS POPULAR

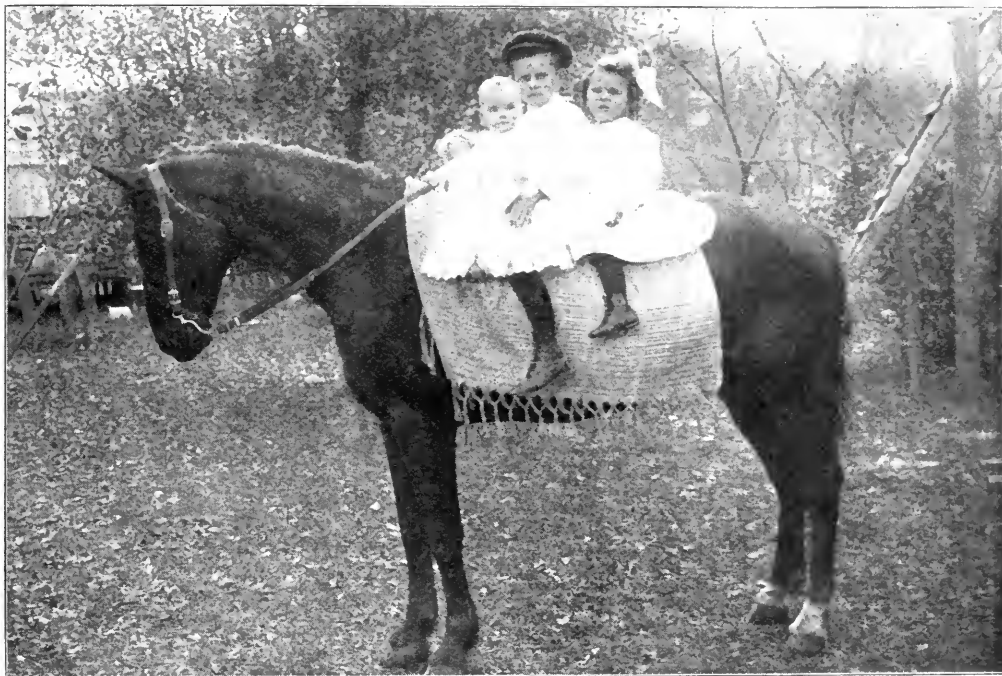
With a recognition of the beginning of your noble enterprise, and the conception and labor associated with the present edifice you have erected for the manufacture of the active principles of medicine, and their therapeutic application to the treatment of disease, I cannot refrain from giving expression to my ardent appreciation. In this attempt I find myself in a condition simulating that of the

author of the "Metamorphoses," and with Ovid exclaim: "*Animus fert dicere formas mutatas corpore. Diī asperate meis coeptis.*"

I deem it an honor to accord to a commendable ambition the credit attaching to

tention is directed in the December number of the journal.

As comparatively little study has been devoted to this most important branch of medicine, of which Dr. J. Fordyce Barker, in one



FAITHFUL CHARLIE AND THE "LITTLE ALKALOIDISTS"

the result of tireless energy and philanthropic industry.

Conscious of the integrity of your purpose to render THE AMERICAN JOURNAL OF CLINICAL MEDICINE the peer of any medical journal in this country, I feel it would be an act of ingratitude to take advantage of the generous offers you present especially to your old patrons to secure the magazine at the present low price.

Apparently it makes no difference what advance is made in the price of subscription, there will be a corresponding increase in the size and character of the contents. This assurance is based upon the history of the past and is undoubtedly the consensus of all the friends of the journal. An illustration of this optimistic expression is furnished in the syllabus of The Clinical Medicine Post-graduate school of therapeutics to which at-

of his clinical lectures, said "our bread and butter depended," it cannot fail in receiving the highest expression of appreciation and gratitude.

We most heartily agree with the editor, that "the course is a splendid one," and confidently hope that his desires will be more than gratified by the number of students who "will take it up" and receive the reward of earnest labor in the interest of humanity.

L. S. BLACKWELL.

Perth Amboy, N. J.

[Thank you, Doctor. It is letters like these coming from men like yourself all over the country that has furnished us the incentive to persevere in our course. We are receiving many words of encouragement upon the "Post-Graduate Course of Therapeutics,"

some of the best men in the country, men identified with the teaching of that branch have written asking to participate in it. I trust, Doctor, you will contribute your share. As the matter develops, whenever you see an opportunity to put in the results of your own readings, thought and experiences, the way is open to you. If the cultured members of the profession like yourself would really interest themselves in this matter we feel satisfied that it will be the means of immense benefit to the profession.—Ed.]

### AN INTERESTING APPLICATION OF H-M-C

I have had one effect from the use of H-M-C which I have failed to see reported by anyone, and that is: that its daily use will anesthetize the perineum for twenty-four to forty-eight hours after the drug is discontinued.

During the past summer I was prostrated with inflammatory rheumatism and had H-M-C injected evenings for five weeks. Eight hours sleep would follow, and in connection with the eliminative treatment I would wake up mornings with the bedding and myself wringing wet with water from head to feet. I had no desire for it after quitting its use, nor any other unpleasant sequence.

G. E. STARNER.

Dunkirk, O.

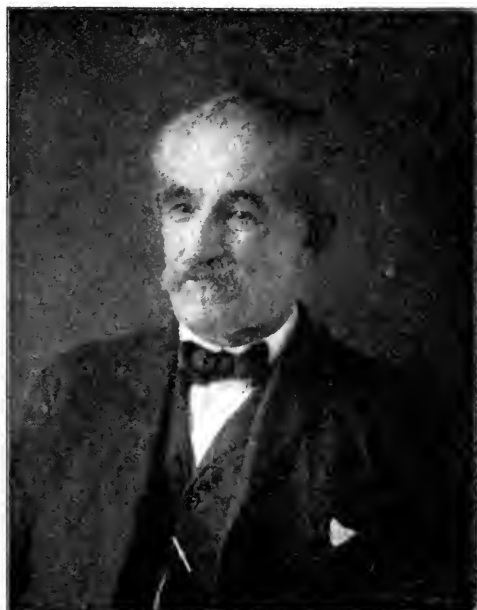
### EXPERIENCE WITH GOITER

Not having seen any reports on goiter I thought the following case might interest your readers:

On Sept. 29 I was called to Washington, D. C., to see Mrs. M., age 60 years, with a goiter of thirty years' standing. She was small in size, about ninety pounds in weight, with a neck measuring nineteen inches. The tumor extended from the sternum to the chin. The treatment for the first three weeks was daily, calcidin, grs. 2; proto-nuclein, three tablets, with compound ointment of iodine applied twice daily and well rubbed in. The following three weeks pro-

tonuclein was omitted, the patient receiving daily calcidin, gr. 1 and biniodide of mercury, gr. 1-12, with the ointment continued as before.

By this time there was marked improvement in every way. Appetite and digestion better; the bowels, previously so constipated as to require epsom salt every few days,



DR. GEORGE ROBERTS

now regular. The pressure on the trachea so relieved that she slept without choking. The neck now measured seventeen inches, the largest reduction being in the upper part of the tumor, so the chin could now be brought down to neck. The tumor is much softer and I now look for more rapid reduction in size.

Not a day passes but that calx iodata comes into use, displacing the old-time cough syrups, as well as potassium iodide for rheumatism and other blood disorders. I have as yet failed to see a case of idiosyncrasy against its use. In this latter respect I find more trouble with hyoscyamine. Many cases will respond beautifully, then a patient will complain of all kinds of sensations and refuse to take it; one or two granules dilating the pupils and drying the

mouth. A lady yesterday said she felt foolish after taking three granules in nine hours. In this case the mouth was dry and pupils fully dilated.

GEO. ROBERTS.

Lincoln, Va.

[Give "small doses, frequently repeated, to effect," Doctor, and the terrors of "idiosyncrasy" disappear.—ED.]

#### DUBOISINE WINS A GOOD CASE

October 1 a young woman, the mother of two children, came to talk with me, as she said, "to please a friend." She did not want an examination. She had suffered from headache almost constantly for three years, having been under some doctor's care all that time. She had been operated upon for laceration of the cervix, but it brought no relief. Every remedy used had failed to help her headache, and she had about decided to stop consulting any more doctors; but this friend had been insistent.

As she would not be examined and did not agree to come again, I decided, after talking to her for a time, that there were two things I might do that would do her some good. First, her breath was bad, and I might correct this; second, I felt I might relieve the congestion of her head.

I gave her the "clean-up and clean-out" treatment, and ordered that a granule of duboisine be taken every ten minutes for six doses and then every hour till the symptoms of headache had passed. After a trial of this method, I told her to come back and see me if [she wished to engage my services farther. In three days she returned, saying that she thought I could cure her (and that's half the battle). I

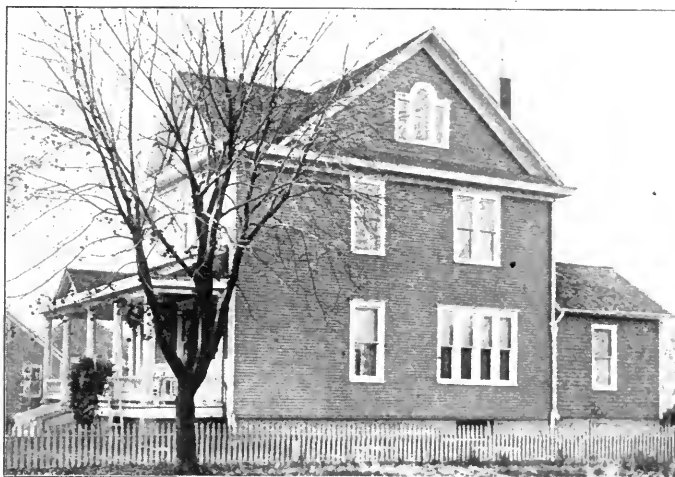
then examined her carefully, and under the treatment instituted she has not since had another headache and bids fair to recover perfect health.

F. G. DE STONE.

San Francisco, Cal.

#### ONE OF THE FAMILY FROM ILLINOIS

The only thing lacking in the accompanying picture, is the face of the owner, Dr. J. B. Scruggs, of O'Fallon, Illinois. We would like to "take a look" at him, his wife and all the little Scruggses—for we feel that there must be some, to fill that fine, big house and make it really worth living in.



RESIDENCE OF DR. J. B. SCRUGGS

The doctor writes that he is using the alkaloids quite extensively, and that he likes them. Of course! That's the story all our friends tell—and the woods are "full of 'em!"

We like these pictures. Somehow they make us feel neighborly—as if we really were near enough to shake hands and pass along the spoken (as we would, "by these presents," the unspoken) word of warm friendly personal regard which we feel for all the family, individually and collectively. Keep the pictures coming! Have some made especially for CLINICAL MEDICINE. Let's see who can make the best exhibit. By the way, while sending along the pic-

tures let us have a few plans of houses and offices. And with every picture or plan give us a short descriptive article. Nor should we forget that this is a *therapeutic* journal.



Loading bananas in Honduras, to be transferred to steamship for New Orleans

### THE HYPODERMIC ANESTHETIC

Last April I wrote you of my experience in the use of morphine and hyoscine in hospital practice as an adjuvant to chloroform. This report was based upon fifty cases in which I gave morphine about one hour before the operation. I then reported the following advantages:

First, the absence of nervousness at the beginning of anesthetization; second, the small amount of chloroform required to produce anesthesia; third, the absence of shock at the initial incision, as evidenced by sudden dilation of the eyelids (this is practically always observable even in profound anesthesia); fourth, the exceedingly small amount of chloroform required to maintain anesthesia; fifth, the almost invariable absence of postoperative nausea. This last has often seemed to me to be the greatest good of all.

Following this experience I made use of the compound H-M-C, finding that it had

the advantages of being all in a single tablet and hence convenient, while the cactin was not to be despised. I have never seen any untoward effect from the use of hyoscine before operation, possibly because I had always

been careful to obtain the pure article. During the following six months I employed the H-M-C tablet in fifty cases, surgical and obstetric. This experience confirms the advantages I had previously found the combination to possess in surgical work. It is quite the only means of producing anesthesia which is characterized by absence of all excitement,

from shock from the first incision with complete freedom from vomiting, and, greatest boon of all, postoperative comfort.

I have been twice operated upon myself; once with chloroform, the second time with the hyoscine, morphine and cactin, followed by a few drops of chloroform; and oh! what a difference! The first time I was horribly sick for two days, vomiting, retching, ready to die from nausea; on the second occasion I was comfortable, sleepy, with no nausea, but hungry.

In obstetric work this tablet is of incalculable value to me. In my practice the doctor has to do everything, attend to the anesthetic, the child and the mother. I used to have confinements where I had to drop the chloroform on a towel over a woman's face, hurriedly rinse my hands and attend to a distending perineum, then back to the chloroform, etc., *ad infinitum*. Now such cases are a delight. The woman dozes comfortably, moves when told to do so, does not complain of pain, the parts seem to relax



better, and best of all, I have two nice, clean hands, and nothing for them to do but attend to the labor *per se*.

A few nights ago I had a case where unfortunately the perineum was torn by a eleven-pound baby. As the woman was dozing after the placenta was expelled, I began tentatively to sew up the perineum without any chloroform, and found that I could complete the operation, while the woman was under the influence of the solitary tablet I had given her two hours before.

Up to the present I have been using the ordinary full-strength tablets. When the woman begins to complain at all bitterly, whether it be in the first or second stage, I inject one full tablet. As a rule, however, I have not found it necessary to use it until the head is getting near the perineum. I have not always used the full dose, but once or twice when I gave a whole tablet early in the conflict I gave one half-tablet later. I have sometimes fancied, when I gave a full tablet toward the end of the second stage, that the pains were delayed and weakened very slightly, though not to any greater extent

than when I used to give chloroform. Lately, therefore, I have been giving half the tablet rather early, and if necessary, giving the remainder later. On the whole I think this is preferable to giving a whole tablet either early or late. The half-strength works with a nicety when used in this manner.

As you will see, my experience covers at least one hundred cases, over a period of eighteen months; hence I feel that I have a

right to an opinion of my own, based on my own experience and not on the reports of strangers. Having employed the combination without cactin and afterward with it, in a sufficient number of cases, I may say frankly that the latter is a decided addition, facilitating in some way the anesthesia and aiding in tranquillizing the patient.

CHARLES GAVILLER.

Grand Valley, Ont.

[Another valuable point brought out by Dr. Gaviller is that it is easier for the doctor to keep his hands aseptic in labor-cases, when using H-M-C, than when he depends upon chloroform. He says that "those who have tried to do everything in a confinement case and keep the hands conscientiously



House occupied by Dr. John Abbott, at Utilla, Honduras

aseptic will appreciate the difference between the two methods." Right you are!—ED.]

#### FROM AN ALKALOIDIST IN HONDURAS

Enclosed herewith you will find my photograph and a half dozen views of the place where I have been spending a month's vacation. Utilla is a small island, lying about eighteen or nineteen miles off the north coast of Honduras and about forty-

five miles to the westward of my home here. Although it is a Spanish possession, most of the inhabitants are of English or American parentage and have the "go-aheadativeness" of their forefathers about them, as you will note from enclosed views.

My success with the alkaloids and active principles has been all that one could de-

[I know that the editor only voices the desires of the entire "family" when he asks Dr. Abbott—my far-off namesake—to tell us that "more" about Central America, its people and their diseases—and how alkaloidal practice is helping solve the doctor's problems there as everywhere else. Let's have another chapter, Doctor.—ED.]

### THE THIRTY REMEDIES MOST USEFUL IN ALKALOIDAL PRACTICE

If all physicians were limited to thirty remedies in the practice of medicine, probably no two would make the same selection. The location, time of year, and whether the physician was in general or special practice, as well as other things, would to a certain extent govern the selection. I am writing this from a general practitioner's standpoint, and will give a selection of thirty remedies which at the present time in my opinion are the most important remedies in alkaloidal practice. That is, if I should adopt the alkaloidal practice exclusively and were



DR. JOHN ABBOTT

With his Number Eight Case, starting out for business

sire and therefore I have no wish to return to the use of the galenicals.

I have found Abbott to be straight in his dealing and his goods just what they are represented to be. CLINICAL MEDICINE is a jewel! Therefore I wish you all manner of good, for the practical help you are putting in the hands of medical men. May we all learn to use the alkaloids better!

I trust that the views may be of service to you and if you desire further information about this country let me know and I will give you what I can.

JOHN ABBOTT.

Oak Ridge, Ruatan, Spanish Honduras.



UTILLA YOUNG LADIES

The two in the upper right- and the lower left-hand corners are the doctor's nieces.

limited to thirty remedies or compounds I should select this list. Of course this list is for internal and hypodermic use exclusively. A physician can take these thirty remedies and do a good general practice so far as internal remedies are concerned. Of course there are many others that would be needed, but one could do very well with these only.

This list should be of some value to physicians just beginning practice and to old physicians who wish to adopt the active principles; that is, it will assist them in making a selection of the most important remedies to begin with.

After making my selection I find that half of my remedies are compounds, which no doubt many will not like, but the value of compounds is very well known to most readers of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, and do not need discussing here. I will give a few of the therapeutic uses of each of the thirty remedies.

1. Anemia and chlorosis formula. Each granule contains iron arsenate, gr. 1-67; quassin, gr. 1-33; quinine hydroferrocyanide, gr. 1-6. Dose, in acute cases, four to eight granules daily, later two to four. This compound acts as an antiperiodic and will give very good results in intermittent fever, anemia, chlorosis, convalescence, etc. It is a good general tonic.

2. Anodyne for Infants (Vaugh): Formula of each granule: nickel bromide, gr. 1-134; codeine sulphate, gr. 1-67; powdered ipecac, gr. 1-134; lithium carbonate, gr. 1-25; oil of anise, m. 1-134; saccharin, q. s. Dose, one or two granules every fifteen to thirty minutes until effect, then less frequently. This is a valuable compound for restless babies, colic, etc.

3. Antiasthmatic (Abbott): Formula of each granule: strychnine arsenate, gr. 1-134; amorphous hyoscyamine, gr. 1-500; lobelin, gr. 1-134; apomorphine hydrochloride, gr. 1-67. Dose, one granule every fifteen minutes until effect and then less frequently. This compound checks respiratory spasm and alleviates attacks of suffocation. It is good remedy for "smothering spells" or shortness of breath.

4. Antimalarial (Dumas): Formula of each pill: strychnine arsenate, gr. 1-250; quinine arsenate, gr. 1-134; iron arsenate, gr. 1-12; quinine hydroferrocyanide, gr. 1-6; capsicin, gr. 1-67. Dose, one pill every two hours until stimulation and then less frequently. This is a valuable antiperiodic and general tonic and can be used with benefit in nearly all debilitated conditions.

5. Antiscorbutic: Formula of each tablet: iodized calcium, gr. 1-3; phytolaccin, gr. 1-3; stillingin, gr. 1-6; arsenic iodide, gr. 1-67; nuclein solution, gtt. 4. Dose, one tablet three or four times a day. This is an extremely important compound for many conditions. It is one of my favorites, as it is often indicated in general practice. If physicians will learn to use this compound it will be a favorite with many of them. It is a systemic antiseptic, alterative and reconstructant of the very best class.

I have found this compound of value in all diseases due to faulty metabolism and retrograde tissue change. In weakly undeveloped children of scrofulous conditions it is of much value. If the teeth are prone to rot add calcium lactophosphate. In glandular involvement it is excellent and of value in chronic malaria with enlargement



DR. J. A. BURNETT.

of the spleen, mumps and the strumous diathesis. It will cure most forms of chronic throat trouble.

6. Aphrodisiac tonic: Formula of each pill: strychnine hypophosphite, gr. 1-100; phosphorus, gr. 1-200; cornin, gr. 1-6; cactin, gr. 1-67; nuclein solution, gtt. 5. Dose,

one or two pills every three, four or six hours. This is a powerful reconstructive aphrodisiac, a stimulant to erectile tissues; but this is not the main use of it. Its most important use is as a general tonic in asthenic conditions and as a heart tonic and sustainer. It revivifies the blood.

7. Apomorphine hydrochloride is an expectorant and emetic. Dose, gr. 1-67, as an expectorant and gr. 1-10 hypodermically as an emetic.

8. Atropine sulphate is of value in night-sweats, uterine hemorrhage and various other conditions which are very well known. Dose, one granule, gr. 1-250, every half to one hour as needed.

9. Iodized calcium is the main remedy in all forms of croup and croupous conditions. It is also used in grippe, bronchitis and various other conditions. It takes the place of potassium iodide. Dose, 10 to 60 grains daily. When given for croup give one grain in hot water every ten to fifteen minutes.

10. Calcium sulphide is a systemic antiseptic and of much value in smallpox, measles, diphtheria, whooping-cough, gonorrhea, furunculosis, carbuncles, skin diseases of various kinds, and in many other diseased conditions. Dose, one to six granules, gr. 1-6 each, every one-half to two hours until saturated, then often enough to keep saturated.

11. Calomel, podophyllin and bilein compound, No. 1. Formula of each tablet: calomel and podophyllin, each gr. 1-6; bilein, gr. 1-8; and strychnine arsenate, gr. 1-250. Dose, one tablet every half hour until four, six or eight are taken, and in two hours after the last dose take effervescent saline laxative. This compound certainly arouses the liver, a thing that is very important in many diseased conditions, especially in acute diseases.

12. Chionanthin is an hepatic stimulant of great value and in very large doses somewhat laxative. It is one of the best remedies for chronic diseases of the liver that we have and a very important remedy in many other diseased conditions. Dose, three to six granules after each meal and at bedtime.

13. Colchicine is one of the best remedies for rheumatism. It should be pushed to free purgative effect in order to be effective. Dose, one granule, gr. 1-134, every two hours until effect, and then less frequently.

14. Cyprapedin is a relaxing nerveine and one that has a wide range of usefulness, especially in nervous complaints. In nervous, "high-strung" women cyprapedin gives good results and in nervous conditions arising during fevers in persons of a mental temperament. It is one of the best remedies in subsultus tendinum. Cyprapedin and scutellarin are somewhat similar in action. In nervous conditions calling for cyprapedin the pupils are usually contracted and for scutellarin they are usually dilated. Cyprapedin is more relaxing than scutellarin, but scutellarin has more influence upon the heart. Dose one to six granules, gr. 1-6, every half to two hours as needed.

15. Dolorpyrine: Formula of each tablet: caffeine citrate, gr. 1-2; sodium bicarbonate, gr. 1; acetanilid, gr. 3 1-2. Dose, one or two tablets every one or two hours as needed for fever or pain.

16. Echinacea is a general antiseptic and can be used in all conditions where there is a tendency to sepsis. It is the best remedy for snake bites and the bites and stings of all reptiles.

17. Gelseminine is a relaxing antispasmodic, nerveine and febrifuge. In some cases small doses are sufficient, but in most cases it should be pushed until there is double vision, in order to get good results. Dose, one to three granules, gr. 1-250, every two hours until effect and then less frequent.

18. Glonoin dilates capillaries and arouses the heart's action and is a quick stimulant. Dose, one or two granules, gr. 1-250, every fifteen to thirty minutes until effect. This remedy acts more quickly when the granules are dissolved on the tongue and then swallowed than when given hypodermically.

19. Hyoscyamine, amorphous, is antispasmodic and mildly hypnotic. It is of value in nearly all pains in the abdomen, such as colic, afterpains, etc. Dose, one

granule, gr. 1-250, every fifteen to thirty minutes until effect, then less frequently.

20. Hyoscine, morphine and cactin comp. No. 1: Formula of each tablet: hyoscine hydrobromide, gr. 1-100; morphine hydrobromide, gr. 1-4; cactin, gr. 1-67. Dose, one tablet hypodermically as needed. This is a general anesthetic, and a valuable hypnotic and analgesic. I use it in most cases where hypodermics of morphine and atropine are generally used. It is very valuable in puerperal convulsions and other forms of convulsions, in cases of obstetrics and various other conditions too numerous to mention.

21. Intestinal antiseptic compound sulphocarbolates: Formula of each tablet: zinc sulphocarbolate, gr. 1-2; calcium sulphocarbolate, gr. 1; sodium sulphocarbolate, grs. 3 1-2; bismuth salicylate, gr. 1-4; menthol, gr. 1-15. Dose, one or two tablets every two hours. This is a valuable compound in typhoid fever, diarrheas, and a great variety of diseased conditions, both local and general.

22. Lithium benzoate is of value in cystitis, pyelitis and other urinary maladies. The most important use that I have found for it is for "burning urine," that is, when there is a burning sensation when urinating, not of gonorrheal origin. I often find such cases, and usually in women, and the urine is hyperacid. If it should happen to be alkaline then ammonium benzoate is the remedy, but it is nearly always hyperacid. Dose, one or two grains every two to four hours.

23. Myricin is a general tonic and stimulant and a remedy of much value in various diseased conditions. Dose, two to three granules, gr. 1-6, every two or three hours. Full information on this remedy can be found in my article, "Myricin," December, 1906, *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*.

24. Neutral cordial: Formula of each tablet: sodium carbonate, gr. 1; sodium sulphocarbolate, gr. 1; emetine, gr. 1-134; hydrastin, gr. 1-6; rhein, gr. 1-6; aromatics, q. s. Dose, one to four tablets every two to four hours. This is a very valuable com-

pound in acid conditions and in most forms of diarrhea. It is of special value in the diarrhea of children when the tongue is broad and with a white pasty coat and the stools sour-smelling.

25. Pilocarpine nitrate is the most powerful diaphoretic and sialogog that we have. It is of value in sthenic cases of erysipelas and various other conditions. Dose, gr. 1-67 to gr. 1-10 as needed.

26. Saline laxative: Formula: purified magnesium sulphate (60 percent) in effervescent combination with pure tartaric acid and sodium bicarbonate, sweetened with cane-sugar. Dose, one to four teaspoonfuls in half to two-thirds of a glass of hot water. Cold water will answer but hot water is best. This is a very important laxative and its uses are very well known.

27. Strychnine arsenate is a general and heart tonic. Its uses are well known. Dose, one or two granules, gr. 1-67, every two, three or four hours, as needed.

28. Sudorific and resolvent. Formula of each granule: emetine, pilocarpine hydrochloride, codeine sulphate, each, gr. 1-67. Dose, one granule every half to two hours. This compound is of much value in quinsy, many forms of sore throat, and is the best cough granule for general use that I have ever used. It will prove to be of value in all cases of bronchial troubles where the secretions are not free enough. It loosens exudations, promotes resolution of pulmonary engorgement and pleuritic effusion. If I was limited to only one cough remedy this compound would be my selection.

29. Uterine sedative and nervine: Formula of each pill: helenin and viburnin, each, gr. 1-12; dioscorein, gr. 1-6; gelsemin, gr. 1-250; avenin, gr. 1-6; scutellarin, gr. 1-12. Dose, one to three pills every two or three hours until effect, then two or three times a day. This is a very valuable compound in many diseases of women and as a general tonic and nervine.

30. Worm remover: Formula of each granule: chelonin, gr. 1-6; santonin, gr. 1-10; podophyllin, gr. 1-33. Dose, for a child six to ten years old, three granules at night and one every two hours next day, until effect.

There are more children bothered with worms than is generally supposed, and occasionally adults have them. I have seen cases of chills refuse to yield to antiperiodics and cholagogs, until a vermifuge was given, when they were easily controlled. Others have noticed this same thing in practice.

JOHN ALBERT BURNETT.

Auburn, Ark.

#### AN EXPERIENCE WITH BEGINNING CARBUNCLE

I snatch a little time to give a recent experience. About ten days ago, I found a lady, middle age, mother of four children (granddaughter of mine by marriage). There was on her neck a carbuncle, a very ugly looking thing and very painful. Knowing from past experience that anthrax was a troublesome condition, I tried a new procedure in the case. I ordered a saline purgative, then saturated the system with calcium sulphide. I made a saturated solution of menthol compound and had it applied constantly when awake.

The next day the dark purple base of the tumor had disappeared, and it looked very much improved; all pain gone. In four days the thing was well.

Now the cause of the above venture. For many years I have cauterized small breaches of continuity with nitrate of silver. You all know this produces black spots, with frequently scabs and pus under them. Now I use a saturated solution of menthol compound instead. Sometimes I use it in powdered form. It does the work and is nontoxic. For sore mouths and throats, it is "the boss." It needs to be made stronger than directed by the makers.

M. W. C. FRAZIER.

Carrizo Springs, Tex.

#### ANTIPROHIBITION

On medical subjects none but a bold man or a profound medical scholar would take issue with you, but on moral questions it is different. We agree that physicians should heartily cooperate in an effort to stay the

tide of intemperance with which the land is inundated and close saloons, but we are sorry to say we do not agree as to the means by which these things can be accomplished. It seems to me the all important thing is to create a healthy moral sentiment in society. We believe that this can be done by teaching truth and executing justice and only in this way. Error demoralizes and degrades men. Truth elevates and ennobles them.

In the early part of the last century men were laboring under the delusion that alcoholic liquor was among the necessities of life. The result was, everybody drank and drunkenness was fearfully prevalent; even the clergy drank, some of them to intoxication. In the second quarter of the nineteenth century temperance men taught that in health men do not need intoxicants, that their habitual use endangered health and happiness, that drunkenness was a grievous sin against God. A public sentiment was thus created against drinking and drunkenness. The result was that the whisky jug was banished from the harvest field, the decanter and wine glass disappeared from the sideboard, and thousands forsook their cups and practised total abstinence. In 1823 the consumption of distilled liquor per capita in the United States was seven and a half gallons; in 1850 it was only two and a half gallons per capita. At that time beer was not much used.

The Maine Liquor law was enacted about the middle of the nineteenth century. Its father, Neal Dow, put forth the following declaration: "The liquor trade transforms thousands upon thousands of good, industrious citizens into drunkards, vagabonds and tramps."

It seems to me that the object of this was to justify the practice of inflicting pains and penalties on the liquor vender and permitting the drinking man and the drunkard to go unpunished. Be this as it may, prohibition is based upon the hypothesis that the saloon is the cause of drunkenness. For a generation the cry has been: "Down with the liquor traffic," as if it were a living, moving monster that seized men and made them drunken in spite of all their efforts to

thwart its purposes. The effort has been to create a public sentiment against the sale of liquor, and it has succeeded, but in so doing it has shifted the guilt of the drunkard to the liquor vender. In the first quarter of the last century the General Assembly of the Presbyterian Church spoke of drunkenness as a crime. In 1886 Schuyler Presbytery declared that drunkenness is not a crime. Those who opposed the idea that drunkenness is a crime did so on the ground that to admit that drunkenness is a crime is opposed to prohibition. They were right. If it be true that it is the duty of the state to keep intoxicants out of men's way she is responsible for the drunkenness within her borders, for were she to do her duty no one would become intoxicated. If it be true that it is the duty of the State to keep alcoholic liquor out of the way of her citizens the drunkard and his family are objects of commiseration; instead of inflicting pains and penalties on the drunkard she is morally bound to compensate him and his family for the injury they have sustained in consequence of her dereliction of duty.

The result of shifting the guilt of the drunkard to the liquor vender is an enormous increase in the consumption of intoxicants. The consumption of distilled liquor has decreased one-half gallon per capita, but the increase in the consumption of beer is immense, and saloons have multiplied out of all proportion to the increase of the population.

"A cause must exist prior to its effect," is an axiom. Noah and Lot were drunken before there was a saloon. Proof positive that the saloon is not the cause of drunkenness.

"Remove the cause and the effect will cease," is a truism. Were all men to stop drinking the saloon would disappear for want of patronage. It necessarily follows that the saloon is the effect of the drinking usages of society. If we would suppress the saloon we must remove the cause that brought it into existence and which still feeds and supports it.

When General Grant was besieging Vicksburg, had he permitted its friends to carry

reenforcements and supplies into it unmo-  
lested he would have been regarded as dis-  
loyal or incompetent. For fifty years the  
great guns, the little guns and the popguns  
of the prohibition host have been pouring  
shot and shell into the saloon. The com-  
mander in chief of that army issued order  
number one. "We do not want to inter-  
fere with men's right to drink." Under this  
order the friends of the saloon have in the  
last year carried into it more than a billion  
dollars to feed the garrison and strengthen  
the works and not a gun has been pointed  
at them.

The highest authority says: "The love  
of money is the root of all evil." So long  
then as our fellow citizens are ready and  
willing to enrich men who sell liquor they  
will get the liquor. It seems to me high  
time men would learn that law is not a force  
that compels men to do this or not to do  
that. If law could have prevented that  
which it prohibits there would not now be  
any evil with which to contend, for the di-  
vine law prohibits every evil. It prohibits  
drunkenness and God enforces this law  
faithfully, and yet men drink to intoxica-  
tion despite the law and its enforcement.  
Since a perfect law perfectly enforced does  
not prevent that which it prohibits it is ir-  
rational to suppose that an imperfect law  
imperfectly enforced will prevent that which  
it prohibits. Observe there is a wide dif-  
ference between prohibiting a thing and  
preventing it. Prohibition does prohibit  
but it does not prevent the sale of liquor.

Law is an educator. "For by the law is  
the knowledge of sin." That is what the  
law prohibits is deemed wrong; what it does  
not prohibit it sanctions. It licenses by  
permission, and is deemed right. There-  
fore were the people of Illinois to place a  
law on her statute book prohibiting the  
manufacture and sale of alcoholic beverages  
and fail to prohibit drunkenness we would  
be teaching that the things prohibited are  
wrong and that which is not prohibited is  
right. I will not be a party to such teach-  
ing.

The divine law prohibits murder, the state  
enforces this law. God's law prohibits

theft, the state enforces this law. The divine law prohibits drunkenness, no good reason can be given why the state should not punish an infraction of this law. Were drunkenness treated as a crime, as it should be, it would necessarily follow that the man who furnished liquor to make another drunken would be a party to the crime of drunkenness and be subject to the same penalty as the drunkard whether the act was done in a saloon or in the finest mansion in the state. Treating drunkenness as a crime would have a salutary effect in deterring the young from forming the drink-habit.

If it be true, as commonly taught, that morality would be promoted by so environing men that they could not sin by drinking to intoxication, it logically follows that the highest state of morals would result from so environing men that they could not sin in any manner. But man is a triune being. He has a physical, a mental and a moral nature. To develop his physical organism man must use his muscles; to develop his mental powers he must exercise his mind, he must think and reason; so to develop his moral nature and increase his capacity for virtue and happiness he must choose between right and wrong. Deprive man of choice and you rob him of his manhood. Without an opportunity to choose man would have no use for a moral nature, his enjoyment would be on a level with that of the birds of the air or the beasts of the field. God has not raised an insuperable barrier between men and wrong-doing. When men propose to do so they assume to be wiser than their maker.

SAMUEL HENRY.

Camp Point, Ill.

[We print Dr. Henry's letter, not because we agree with his position, but in the interests of fair-play—that "the other side" may have its hearing. We believe that the saloon is the greatest force for evil in modern society, and that every possible effort should be made to destroy it because it does breed crime, degeneracy and immorality. Because we do not wish to "deprive man of choice" should we place temptation at his door and

thus rob him of his manhood? The unlimited privilege of "choice" could be used to excuse any degree of license.—ED.]

#### A MAN WHO DOES THINGS

I have just finished reading one of my journals and all the clamoring over the idea of aborting pneumonia. Some doctors think it out of the bounds of reason to make such claims. I see one brother writes, "You can't claim a case of pneumonia until it has reached the stage of consolidation or lung-solidified." While I do not think we need to wait quite so long to diagnose a case of pneumonia, I will accept his position for the sake of argument and then, with the alkaloidal treatment (in the hands of a competent man) the case can be handled O. K. and the patient make a quick recovery. Now, I will give you two cases and let you be the judge and name them.

Case 1.—Negro girl, 8 years of age. Was called Feb. 2, 1906, at 6 p. m. Found patient suffering with severe headache, temperature 103.4°F., pulse 120, respiration 40. Gave acetanilid compound tablets in proper dose to reduce temperature, calomel and podophyllin, gr. 1-6 each, every hour for six doses. Did not see patient any more until Feb. 4 and found patient's temperature 104°F., pulse 128, respiration 46. Very tight cough, rusty sputum, very severe pain in right side. On examination found dull area with crepitation over upper lobe; patient wanted to lie on the right side; breathing very short and loud. I put her on the alkaloidal treatment for—well I won't say—but I pushed the treatment. Saw her next day; pulse 106, respiration 36, temperature 102°F. Left instructions to continue treatment as before. Next day temperature 100°F., respiration 30, pulse 90; still coughing and spitting blood. Continued the treatment but left off the push. Next day dismissed the case and patient made a speedy recovery.

Case 2. Lady, age 24, married, family history good. Was taken with chill March 7 at 6 p. m. Walked home about half a mile;



suffered all night with very severe pain in left side. I was called next morning about 10 a. m. Found patient with rose-flush, panting, and said she could not get a long breath. Very severe cough, sputum rusty; temperature 104.2°F., pulse 140, respiration 46. On examination, found lung solidified. I say "solidified;" I can't say that exactly, but disease was spreading very rapidly over lung. Headache, heavily coated tongue. Placed here on alkaloidal treatment, called again at 6 p. m., same day; patient much better. Called next day at 11 p. m. Found patient still better, pulse 98, respiration 36, temperature 100°F. Never made another visit. Patient is now taking a hand in piling brush and helping her husband on the farm.

Now you may call this what you will, but the alkaloids are the thing to knock it out. I have no fears about handling pneumonia since I began with the alkaloidal treatment, and by the way, I am getting short on alkaloids, so Monday or Tuesday you may look for another order.

M. P. H.

Texas.

[Your arguments are convincing and your position is unassailable. Independent men have long since come over to our way of thinking, but there will always be a certain number of doubting Thomases and "blind" men, who having eyes, see not, and having brains, understand not.—ED.]

#### ENURESIS FROM LOCAL IRRITATION

A bright little girl of four years was brought to me for treatment for incontinence of urine. The little lady would get along very well during the forenoon but during the afternoon and night she could not control her bladder. The mother tried dieting and persuasion, but with no effect. I asked for a sample of her urine and suggested the possibility of some local irritation. The next day the parents brought the little girl in for examination, the father stating that the mother had seen something "like fish bones." Upon examination and removal the "fish bones" proved to be the beards of a spikelet

of some kind of grass. The spikelet had worked its way into the fold to the left of the meatus urinarius until it was entirely covered except the ends of the beards which were visible and had greatly irritated the surrounding mucosa.

This case illustrates forcibly the need of careful examination and accurate diagnosis, and the wisdom of trying to remove the cause of any trouble instead of contenting ourselves with simply treating symptoms. Any amount of medicine would have been of no avail so long as that spikelet remained imbedded in the mucosa, thus keeping up the local irritation.

J. R. SCHOFIELD.

Fort Collins, Colo.

[Right you are, Doctor! Get to the bottom of things. Examine into essential causes. Know the problem before you—then its solution will often be found easy, often ludicrously easy. The trouble with too many doctors is that they only half do their work. Be thorough! That's the only safe way.—ED.]

#### MORE PNEUMONIA EXPERIENCE

Six days ago I was called to N. C., male, age 20, who was very ill. About 2 o'clock in the morning he took a chill and a pain near the left nipple, headache and rise of temperature. He got up and fainted and continued to faint every time he rose up.

I saw him in eight hours from chill. His temperature was 105° F., respiration 32, pulse too weak and uncertain to get any correct count, was expectorating a bloody mucus, delirious, and now and then vomiting a greenish-looking fluid. I examined him with care, by physical diagnosis, and the diagnosis was positive, lobar pneumonia in the lower lobe of the left lung. It was plain to me and visible to a multitude of witnesses present that he could not last but a day or two if not relieved.

Treatment: Calomel, grain 1-2 every half hour for six doses, to be followed by saline, then intestinal antiseptic. At the same

time I gave the following: aconitine granules, gr. 1-134, No. 20; digitalin granules, gr. 1-67, No. 20; strychnine granules, gr. 1-134, No. 20; water, twenty teaspoonfuls. Dose, one teaspoonful every half-hour till fever lowers, then not so often. The fever and delirium continued high till about the twelfth dose, then it began to lower a little; I left the remedies with the nurse with directions and returned in a few hours. I found the patient cold, pulseless. I asked the nurse about the mixture. She said all was given, last dose two hours ago. Was it aconitine poison? or was it the "crisis" of pneumonia? He had taken all the mixture of aconitine in sixteen hours. He looked as if he were dying; but let it be poison or crisis, the application of heat, nitrate of strychnine, atropine, used with hypodermic syringe, restored him and in an hour I could count his pulse for the first time. Here I gave nuclein, and a little food; in a few hours later I put him on triple arsenates with nuclein and calcidin. He had no more fever nor pain but expectorated a little bloody mucus for twenty-four hours, and now, the fourth day, is sitting up, taking food and has been dismissed, well.

One physician has said this was not pneumonia, for it got well too quickly. But I am fully competent to diagnose pneumonia. Another says pneumonia abruptly terminates in a few cases: this might account for it. No, for I have treated and aborted four other cases like this last season, with the same line of alkaloids, except digitalin—veratrine and strychnine having been added to or withheld from the aconitine to suit the pulse. This is the largest amount of aconitine I have ever given to one patient. In my hands it requires from twelve to twenty aconitine granules with some one or all of the other alkaloids, digitalin, veratrine, strychnine—completely to control the fever and the circulation and put an end to the pneumonia in adults.

To be successful this line of treatment must be begun during the first few hours of illness, which will abort the vast majority of pneumonias.

There is a treatment for pneumonia, an effective treatment, that has been successful in my hands in aborting, cutting short and curing five cases of croupous pneumonia. These cases were treated on the plan of Dr. Abbott with the alkaloids. I never have obtained any help from external remedies, and do not use anything whatever externally. In bronchial pneumonia in children I have treated many cases in the last two years, with the alkaloids and calcidin and every patient was, I think, out of danger in less than seventy-two hours of treatment. It takes seven to ten days with the "regular" remedies and we then lose 40 per cent under two years' old; but that time and treatment is a matter of the past with me, and should be with every one.

I. N. MEYERS.

Speedwell, Tenn.

[It is hard to tell from the doctor's description whether an overdose of aconitine was given in this case. We think not—but care, watchfulness and "dose enough" will always give us safety.—ED.]

#### IS IT CONSTITUTIONAL?

I wish to take issue with a statement made in your November issue, page 1414, on "Reciprocity." If you will turn to the national constitution, Article 1, Section 8, Paragraph 3, you will find that Congress has the power "to regulate commerce among the several states." In commenting on this clause, Andrew W. Young says: "Commerce, in a broad sense, as used in this clause by the constitution, means not only trade by sea and land, but all intercourse."

Again, Article 4, Section 2, Clause 1: "The citizens of each State shall be entitled to all the privileges and immunities of citizens in the several States."

Again under amendments, Article 13, Section 1: "No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States."

In regard to constitutionality, I think that the above quoted parts from the several states do not give authority for prohibiting a physician properly registered in one state from practising in any section of the United States.

E. E. Lusk.

Keota, Ia.

The practical thing for us to do is to work for *practical* reciprocity—and this we all ought to be doing.—ED.]

### A HAPPY TENNESSEE DOCTOR

On this page we show a picture of the home and family of Dr. J. T. Graham, of



DR. J. T. GRAHAM AND FAMILY  
Taken in front of his beautiful Tennessee home

[Possibly you are right, Doctor, but to us all these quotations mean only that in the enforcement of local or state laws a resident of another state shall not be discriminated against and shall be treated exactly as though he were a resident of the state where he may temporarily be residing. According to your interpretation a man who had paid his dog license in Indianapolis might turn the "critter" loose on the streets of Chicago with the expectation that the Indiana "medal" would save the dog from the pound. But why discuss it?

Booneville, Tennessee. It is quite evident that the doctor has taken the President's injunctions concerning race suicide to heart. He has a family of which any man ought to be proud, and he gives an example which many a doctor might emulate.

Dr. Graham writes us that he has practised twenty-six years in all, having received his medical degree from Vanderbilt University. He has a good intelligent people to practise among, and there are good schools and churches and all the other things which make life worth living in his community.

The country is rich—fine for farming and stockraising. Altogether his “lines have fallen in pleasant places.” With a splendid family, a good home, a good income, good practice and good friends—what more can one wish? Under such conditions life should move along sweetly indeed. And we know, from looking upon the doctor’s face, and those of his family, that it does.

“Here’s to your good health! May you live long and prosper!”

### DOCTORS: OLD AND NEW

The following splendid tribute to the “old-time doctor”—with an interpolated little “knock” of the present-day species—was sent us by Dr. J. H. Lowrey, of Neola, Iowa. It was written by Bailey, of the *Britt Tribune*:

What a difference there is between the old-time doctor and the modern M. D. The old doctor used to come out to the farm on horseback, bringing his pills and potions in a hand-bag. All the children ran to greet him, he was like one of the family. He was nurse, physician, friend and mentor. He tied his horse to one of the pillars of the porch, and some of the “kids” put it in the barn, and rubbed it down, and put blankets on it, for the lives of many of us depended at times on the speed of the doctor’s horse. The longest word that he used was not more than three-quarters of an inch long, and all knew what it meant. Sometimes he would stay a day or two and watch the symptoms of the patient. No one had pneumonia then, it was lung-fever; no one had appendicitis, it was bellyache; no one had lumbago, it was lame back; no one had Bright’s disease, it was a misery. No one was sunstruck, they were drunk. No one had heart-failure, they died from natural causes. They did not open a man to see what ailed him till after he was dead, and thus saved him from the extra pain; and if they left their instruments inside of him, he never “kicked” if the doctors did not.

Your old-time doctor carried a few bottles containing decoctions, preparations, tinctures, panaceas and potions; salve for old sores, cuts and bruises, and ointment for itch and burns. If a man broke his leg, they never reduced the fracture, they simply “set” the leg. When a baby was born, all the use they had for a doctor was to examine it after it was dressed and see if the “soft spot” in its head was in the right place, and if not, to “fix” it. If you got into a fight and got your head cut open, he did not dress the wound, he simply sewed up the gash and advised you to drink more home-brewed beer and less store whisky.

When he got sick himself, and his brother doctors met in consultation and told him he was going to die, he told them he would live to dance

on their graves. And he did. He kept alive by grit, and showed other people how to do the same. He could sleep riding in a saddle, and he never presented a “bill.” When he needed money, if you had it and would not pay him, he would get off the horse, give you an all-fired good thrashing and make out a receipt in full; the next man paid without whimpering.

He was a pillar in the church and the friend of everyone. He could sing in the choir, pull teeth, work out his poll-tax on the road, and tell the best story of anyone in town. His wife knew as much about medicine as he did, and sometimes more. If your tooth ached very bad and the doctor happened to be gone she would pull it for you, then pat you on the head and call you “poor boy” in a tone of voice that made you want to have another one pulled, and then she would not let you pay a cent for it either.

God bless those old family doctors! We don’t know whether they ever saw a college or not, but they eased more dying people to shuffle off easily, and helped more living ones to enjoy life, than any other members of society. They did not meet and conspire to get the largest amount of money for their services, whether it was earned or not; they did not work legislatures to get their claims preferred to those of all others; they took their chances in the battle of life. And a whole lot of heaven came to them on earth in the consciousness of good deeds done and the love of their fellow men.

The modern physician seldom gets into the hearts of his patients as they did in those olden days. There is more commercialism in every trade and profession than there used to be. The dollar stands first, and the one who hasn’t got it must take second place. The automobile is outwinding the saddle-horse, the dentist must attend the teeth, a chiropodist fixes the toes, an oculist attends the eyes, an aurist the ears, and a specialist takes care of the old sores and the chronic cases. The regular physician has nothing left but appendicitis and obstetrics.

Medical science has made great strides. They take a man’s liver out and make him a wooden one that works better; they make him a wooden nose or a silver palate. They make a new lung out of a football, and take out about half of his inside works and have him feeling like a peacock with a wooden leg. They have discovered that man was made wrong in some respects, anyhow, to begin with, and that he is just as well off without a gall-sack, spleen, or more than one kidney as to have the whole shooting match to carry around with him for nothing. Sometimes they leave their working tools inside when they get done with them, but the next one that gets at him has taken them out, so far as the medical books have taken note.

The M. D. of today starts out with a string of words, describing a lot of new diseases, that are spelled so crooked that the notches on them would file a handsaw. He graduates, gets a diploma, a pill box, and a saw to cut the bones with, a lead pencil to write the prescription with, and he is fixed; all he wants is patience and patients. When he gets one, he begins to count the money, for his bill is a preferred one. The butcher who kept the fellow alive until the doctor graduated

can whistle for his pay; the clothier who kept his backbone from the winter's blast can do the same; the lawyer who kept him out of state's prison got it in advance, or else the fellow went, but all the rest can look on. The doctor has a thousand dollars' worth of college, forty cents' worth of saw, a pill box that cost five dollars at wholesale, and the earth is his with a mortgage on the hereafter. An editor has three or four thousand dollars' worth of machinery and his paper has kept the man from suicide by its optimism, yet he couldn't get within gunshot of a nickel, neither could the grave-digger, the undertaker or the tradesman until the doctor bill is settled.

The greatness of the old-time doctor has come down unimpaired to the present generation, until he is the only one that doesn't have to collect his pay. When he is called out he knows that the oculist, aurist, chiropodist, will doctor what is "in sight." He has to deal with the "insides," and the longer the words he uses the tougher the disease is supposed to be, and the longer the bill. The dentist now pulls all the teeth, leaving the doctor nothing to pull but the leg; however, that is plenty. The automobile has taken the place of the old swaybacked riding horse, and the new dictionary-makers are working nights to keep up with the new words and then get behind. Men are born, marry and die as of old, and we don't see that they live to be any older than they formerly did.

The old-fashioned doctor with his saddle-bags has gone, but his memory is revered by thousands.

#### THAT ATTACK UPON H-M-C IN THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

*The Journal of the American Medical Association*, in its number for December 21, contained a bitter and vicious attack upon H-M-C (Abbott)—four pages of closely printed matter, equal to about twelve pages of *CLINICAL MEDICINE*. In variance from their preceding action of refusing us space for reply, the same was tendered to us on this occasion, we assume because so many American doctors have objected to this policy of throttling an antagonist (or one who for any reason may be objected to) without giving him an opportunity to present his side of a question. We have therefore prepared and submitted to *The Journal* an answer to this totally unwarranted attack upon us and have received the assurance that it will be published.

We should like to publish the entire discussion, both sides, to spread the whole thing before our readers, so that they could

fairly judge for themselves as to the merits of our cause, and see with their own eyes with what hatred and contemptuous superciliousness the attacks upon us are filled. But to give this fully, both attack and reply, would take a very large portion of this number of *CLINICAL MEDICINE*, much more than we can spare—for the mission of our journal is not to tear down, to enter into controversies, but to build up, teach helpful therapeutics, to represent the great unheard majority in their quest for truth.

In brief, *The Journal* attack is based upon two points: The assumption of the complete identity of hyoscyne and scopolamine, and the assumption, based upon Hatcher's animal experiments, that cactin, having no digitalis or strychnine action, is therefore inert. Woven in with these two central points are carefully selected quotations from our literature, every identified or imagined technical error, every debatable question being brought insistently to the foreground and upon it the technical knowledge and argumentative skilfulness of our erudite critics, through months of labor, are exhausted.

In our reply we point out the following facts:

That we have never claimed *priority* of hypodermic anesthesia, our claims resting upon the superior quality of our true hyoscyne preparation, and upon its introduction to the physicians of America.

That the chemical identity of absolutely pure hyoscyne and scopolamine may be admitted, yet the real question is to determine which product is of the highest quality, as obtainable on the market, and which is, therefore, the most satisfactory therapeutically.

That Pharmacopeial tests, either in Germany or the United States, are not sufficient to determine, practically, the purity or impurity of scopolamine or hyoscyne.

That the impurities are the dangerous apotropine and the optically confusing atropine, and that *both are ignored by the Pharmacopeias and our critic.*

That the light-rotation tests, by which these impurities are recognized, *are not given*

*in the Pharmacopeias or referred to by our critic.*

That the dangerous side-effects of scopolamine are evidently due to the apotropine, and that in all probability the early deaths and bad effects were due to the use of a drug filled with this impurity.

That a scopolamine of low optical rotation and therefore probably contaminated with apotropine is still obtainable on the market.

That hyoscine from hyoscyamus, as tested by us, does not show the same degree of optical variation, as scopolamine from scopolia, and is of remarkably uniform quality—therefore to be preferred.

That we have purchased from Merck and Company and from other sources and use only true hyoscine from hyoscyamus, absolute evidence being submitted—our critic insinuating that *we* really have used scopolamine.

That cactin is what it is claimed to be a concentration of *cactus grandiflorus*.

That cactin is prepared by us from a superior, purified, concentrated liquid preparation made for us in large quantity direct from especially selected green cactus of the proper variety by the William S. Merrill Chemical Company.

That the therapeutic action of cactin is identical with that of cactus, the active principles having been studied, but that as yet their range of activity is undetermined.

That more is known of the chemistry of cactus than our critic has as yet determined, a glucoside being known to be present and probably an alkaloid.

That Hatcher's studies are indeterminate, proving nothing new or unknown whatever; and that while no manufacturer has ever before undertaken investigation of this product we did engage Matthews of Chicago University to do this work for us.

That Matthews, after taking our money (he has since returned it) and making a preliminary favorable report, suddenly turned his resources over to our enemies, without consulting us and without mak-

ing us a detailed report of the work he had done under our orders.

That I am having careful research work done on cactin, and that while I will not be stampeded in my efforts I purpose to cover the ground carefully, both from the clinical and pharmacologic standpoint, and, as nearly as possible, know all there is to be known about this product, in which I have great confidence.

That I am supported in my faith in H-M-C by the enthusiastic testimony of thousands of physicians, many of them members of the American Medical Association—more and higher in its real ranks than my misguided critics would believe.

That with all my work for the uplift of the doctor and with all my cooperation in the suppression of quackery and fraud I have received at the hands of the Council on Pharmacy and Chemistry and the editor of *The Journal*, Dr. Geo. H. Simmons, only slurs, sneers and abuse—never a particle of encouragement or help, either directly or indirectly.

That I am not submissive to abuse, but yet genuinely anxious to improve my work in every possible way and shall welcome suggestions to that end.

That all I ask is the "square deal"—and that I am willing to rest my case with the doctors of America.

Doubtless this article will be *warmly* received by the Council. Further discussion of it may then well wait till we know what disposition is made of it in the columns of *The Journal*. We can all bide our time. Meanwhile, if any of the readers of CLINICAL MEDICINE desire to see a full copy of our reply to *The Journal's* attack it is at their disposition for the asking.

Our answer is in their hands. When we see how they treat it and us we shall then know how further to treat them.

LATER: Since this has been prepared for the press our article has appeared in the *J.A.M.A.*, but it has been cut and "edited" so that things properly critical of their position, evidence of manifest error, misquotations for purpose, etc., and our appeals for fair play, do not appear. This fact,

and the unfair and sneering tone of the comment, call for further consideration. We shall take up this matter later.

W. C. ABBOTT

Chicago, Ill.

### A LETTER FROM DR. VAN METER

We print below a letter received from Dr. B. F. Van Meter, in which he objects to some statements made in the columns of *CLINICAL MEDICINE*. Because we believe in giving every man an opportunity to tell his own story we have opened our columns to this letter, although it is an unfair presentation of the matter at issue, at least in our opinion. In order to get this letter into this number we have been compelled to hold the forms of *CLINICAL MEDICINE* for several days:

#### THE VAN METER CASE

In the December number of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* on page 1509 and 1510 appears the following editorial comment on a letter from a correspondent:

"Referring to the Van Meter case, we just want to ask the question, whether it was altogether fair in him to take a moribund patient, use an anesthetic he had never previously employed and did not believe in (considering it "too dangerous"), leave the administration in the hands of a nurse who had never used the anesthetic before with the simple instructions to give three tablets one after the other, no physician being on hand at the time, then after the operation to go away, leaving the patient in the hands of the same nurse, again no physician at hand, and with (we assume) no instructions which would enable her to recognize an emergency such as Dr. Walker describes, and after all this to ascribe the death to the H-M-C?"

As the editor of *CLINICAL MEDICINE* plainly refers to me and to a case with which I was connected, I wish to make the following statement: The patient in question was taken by Dr. Center, the family physician, to Dr. J. A. Stucky of Lexington, by whom I was called in consultation. I made a provisional diagnosis of sarcoma of the parotid and advised an operation. Dr. Center was to let me know later on regarding it. He finally called me up, saying that the patient desires to have me operate and that he (Dr. Center) wanted to use H-M-C as an anesthetic. I told him that I had never used it and that it had never appealed to me. He replied that he had used it in a few cases and that he was pleased with its action, and, for the case in hand, he considered it safer than ether. I replied that I would not use it as I was ignorant of the best method of its application, but that if he desired, I would consent to his using it. I met him at the hospital by appointment and introduced him to the head nurse of the ward, remarking specifically to her at the time, "You will take all

your orders with reference to this anesthetic from Dr. Center." She took her order book and wrote at Dr. Center's dictation the directions as to how and when the tablets were to be administered and how many were to be given. As to the condition of the patient, he was walking about the streets the day before the operation and walked to the hospital unassisted. In my opinion, he would have walked out again if ether had been used. The operation turned out to be a very simple affair, being simply the enucleation of a tubercular lymphatic gland within the parotid gland. Dr. Center congratulated me on the operation after it was over and stated that the patient "would sleep five or six hours and then wake up and ask for 'a meal of victuals.'" I said, "I hope so, but I don't like the fact of his being so blue." The patient was put back to bed and the collapse occurred about two hours after the operation. The house surgeon had counted the patient's pulse and respiration thirty minutes before the collapse and was present almost immediately when it occurred. Dr. George P. Sprague, one of the best men in our city, was in the ward at the time of the collapse. He at once ordered a hypodermic of strychnine and himself carried on the artificial respiration as long as there seemed to be any hope.

In the light of this statement, which can readily be proven by the head nurse, the house surgeon and other witnesses, it will be seen that the statements of the editor of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* are incorrect on the following points:

- (1) The patient was not "moribund."
- (2) I did not use an anesthetic that I "had never previously employed and did not believe in." The anesthetic was administered by Dr. Center, who stated that he had used it in a number of previous cases.
- (3) I did not "leave the administration in the hands of a nurse who had never used the anesthetic before, etc." The same nurse had nursed a case for Dr. Stucky the week before.
- (4) The patient was not left "in the hands of the nurse with no physician at hand." The house surgeon saw the patient just before the collapse occurred and both he and Dr. Sprague were at the bedside almost immediately.

The entire statement of the editor of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* is based on ignorance of the facts and unwarranted assumptions. The only possible point of criticism for myself lies in the fact that I allowed myself to be persuaded by the family physician and allowed him to use an anesthetic in which I had no confidence, and for the makers of which I had no respect. But at that time I did not know as much about "Brother" Abbott and The Alkaloidal Company as I do now. With my present knowledge of H-M-C there are not enough family physicians in America to persuade me to repeat the dose.

Very truly yours,

B. F. VAN METER.

Lexington, Ky.

[We have noted with some interest and amusement that Dr. Van Meter's letter and the report just presented, while both typewritten, are decidedly different in appear-

ance, style, and in every other way. In the first place, his letter presents numerous peculiarities of spelling, and is written on the same typewriting machine and with the same "lay-out" that Van Meter has used in previous correspondence, while the article which accompanies it, the one just preceding, is an exact duplicate, both in paper and machine-work, *as well as in its distinctive style*, of the copy of his alleged original report published over his name in *The Journal of the American Medical Association*. This peculiarity, taken with the statement of Dr. Van Meter that a copy of the material published above is now in the hands of Dr. Simmons of *The Journal* of the Association, makes us smile.

We are willing to give every man who thinks he has a grievance against us a fair hearing in these columns. If there are more of this class let them come forward. We are glad to have disagreement if it is based on truth, for only in this way can we get the nearest right, which is our only aim and our most earnest desire.

In connection with this report it may likewise be of interest to our readers to know that our answer to the widely heralded attack on us, made at Torrent, Ky., last summer by Holloway, Van Meter and others, was refused space in *The Kentucky Medical Journal*, which, however, printed an inaccurate and unfair account of this attack, which has been reprinted at somebody's expense and distributed where it seemingly was thought it would likely produce the most disastrous results to us.

In order that our readers may have the evidence before them we reprint Dr. Center's letter from our November number, in which, likewise, if they care to refer to it, we published Dr. Van Meter's report in full, which he now suggests our republishing. Dr. Center's letter follows:

DEAR DOCTOR ABBOTT:

Your letter of inquiry as to the death of J. H. E. at Lexington, Kentucky, is at hand. I was there and witnessed the whole thing, and all that Dr. Van Meter has said in his statement is true but one: that is, *I did not give the medicine*. I did ask Dr. Van Meter over the 'phone, the evening before the operation, to use the H-M-C, and later the same evening we met at the Good Samaritan

Hospital and ordered the nurse to give the H-M-C, as stated by Dr. Van Meter. When I got to the hospital the next morning the third dose had just been given, and the patient was sound asleep and ready for the table when the third dose was given.

Mr. J. H. E. was pale and the postmortem revealed that he did not have much blood nor muscle, but when Dr. Van Meter and I left the hospital I didn't see any reason for alarm. But there is one thing I have thought of since then. That tumor was attached to the top of the windpipe, and when the tumor was pressed he would cough up the tubercular matter in varying quantities, and I believe the tumor was discharging into the windpipe. Now, considerable serum and blood may have run in from the wound, into the larynx, and helped to cause the death.

I don't believe the H-M-C was the cause of death any more than chloroform or ether would have caused death; and really, he had lived about as long as he could without an operation. The doctor asked me what I had against him that made me bring such patients to him; and I told him that patients that could be cured I cured at home, and patients that could not be cured I brought to Lexington to die. And in the consultation Mr. J. H. E. asked Dr. Van Meter if he considered the operation serious, and he told him that it was, but it was his only chance for life and that he might die on the table, but if he survived the operation he might recover. And I must confess that I acted on my best judgment, and if there is any blame to be on any one, let it fall on me, not on Dr. Van Meter, for he told me that he knew nothing about the H-M-C at all. I am still using the H-M-C with excellent results and shall continue to use it until it disappoints me. Then, and not until then, I shall lay it aside.

Yours very truly,

G. M. CENTER.

This letter was first sent to *The Journal of the Association*, presumably about as it appears above, but it was not accorded even the courtesy of acknowledgment. Upon inquiry of Dr. Center as to what disposition was made of it by Dr. Simmons, Dr. Center wrote: "I did not get a word from him or anyone else in regard to my article sent them for publication."

It seems pretty clear that our side of this controversy is not welcomed by the official organs.

Now we want to ask you to contrast carefully the statements made by Dr. Van Meter and those made by Dr. Center, and more important still, the spirit shown in the two letters. Van Meter's is full of hatred, vindictiveness and anger; Center's, while stating his relation to the case clearly and showing that he had no part whatever in the actual administration of the remedy or any care of the case, before or after operation, attempts



rather to shield Van Meter, who in the letter herewith printed attempts to shift the entire responsibility for its quite apparent mismanagement to the shoulders of others.

The points which strike us upon reading Dr. Van Meter's letter are about as follows:

1. That from the beginning he was prejudiced against the H-M-C compound, apparently knew nothing whatever of its action, and made no attempt to familiarize himself with it.

2. That apparently knowing nothing of its contraindications, such as alcoholism, or its possible dangers in this special case, he still permitted the use of the maximum dose (dangerous in such a case) and that no physician was in attendance when the anesthetic was given.

3. That in spite of the fact that the case was operated upon in his own service, and that therefore he was really responsible for it, he endeavors to shift the entire responsibility upon Dr. Center.

It is possible that this death should be ascribed to the hypodermic anesthetic, though Dr. Center says: "I don't believe the H-M-C was the cause of the death any more than chloroform or ether would have caused death." We have never minimized its dangers, or asserted that it was free from danger. On the contrary, we have pointed these out repeatedly, urging physicians to use this powerful combination (as well as other anesthetics) with the utmost care, especially until they have acquired familiarity with it. Dr. Van Meter acquired no such familiarity and didn't try to—wont try to, he says, and if this is his style we do not blame him. There have been many deaths from morphine alone, from every powerful toxic drug, but is that any reason why they should not be used? Certainly not—simply an added incentive to care, to study of their action, to familiarity with their therapeutic uses. Has Van Meter satisfied these conditions concerning H-M-C? It is hardly necessary to ask that question twice.

If any man expressed his sentiments toward you as this man has toward us, would you accept him as a judge or juror in any case in which you were a party inter-

ested? Granting him the intention of telling "the truth, the whole truth and nothing but the truth, so help him God?", would you accept his testimony on the witness-stand without allowance for the personal prejudice so frankly acknowledged?

In Van Meter's dislikes the readers of CLINICAL MEDICINE have no interest whatever. All they care for is whether H-M-C is or is not a useful agent for their use. If it is good, they cannot afford to leave its advantages to competitors.

Dr. Van Meter writes us that he is sending this letter to Dr. Simmons of *The Journal*, to be held till he finds out whether we are going to publish it or not.

In one point we heartily agree with Van Meter—and that is in the confidence he apparently feels as to the welcome that he will be given by the editor of the *J. A. M. A.*—[ED.]

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#### CALCIUM SULPHIDE.—STRICTURE.— NEPHRITIS

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Of all the medical journals I receive I consider CLINICAL MEDICINE the most practical and best. Soon after receiving the first number I also received a copy of Abbott's "Alkaloidal Digest." Both the "Digest" and THE CLINIC are full of valuable suggestions. The "Digest" contains special articles that ought to be worth hundreds of dollars every year to any doctor.

Calcium sulphide, for instance, will be found nearly a specific in whooping-cough, acne, boils and urticaria. In scrofula it is valuable. In tuberculosis it will loosen the dry cough, increase secretion and favor expectoration. I have known cases in which cavities had formed in which a short use of calcium sulphide caused such an improvement that the bacillus entirely disappeared from the sputum and the patients recovered. (Of course every doctor should know that most of these tubercular cases need iron for the blood, nux vomica or strychnine for the heart, with plenty of good air, eggs, milk, etc.)

In urethritis calcium sulphide, gr. 1-6 or 1-3 every hour, with an injection of potas-

sium permanganate, 1-4 grain to the ounce of water, used four times a day, is very successful. When however the urethritis is caused by a cystitis, nephritis or phosphaturia, it should be immediately discontinued as it will aggravate all these troubles and fail to remedy the urethritis. When urethritis is caused by any one of the above mentioned causes it must first be overcome before attempting or expecting to do much for the urethritis.

Often we read articles in medical journals in which the authors advise in chronic urethritis the use of sounds, and all these doctors, by recommending the treatment, confessed that they had reached the limit of their therapeutic skill. Generally the use of sounds does no good and often is positively harmful. It simply makes business for the experienced doctor, whom it often takes months to overcome the injury caused. Occasionally patients are so injured by this sound-treatment that they will remain sufferers during the remainder of their life. Even in cases of stricture it is needless to pass sounds into the deep urethra. Doctors who do so forget that the Great Architect in His wisdom so constructed the deep urethra that stricture, very, very seldom, if ever, is found in it. Even makers of instruments for measuring and cutting stricture make all these instruments perfectly straight. Consequently it is impossible to pass them through the deep urethra. Moreover, hospital records prove that out of 258 strictures 52 were in the first quarter inch of the urethra, 63 in the following inch, 48 from 1-4 to 2 1-2, 48 from 2 1-4 to 3 1-4, 19 from 3 1-4 to 4 1-4, 14 from 4 1-2 to 5 1-4, 8 from 5 1-4 to 6 1-4, 6 from 6 1-4 to 7 1-4 inches. In another series of 357 urethral strictures, only five were deeper than five inches.

It is claimed that there has been an alarming increase of nephritis within the past fifteen or twenty years. Experienced observers attribute this increase of Bright's disease to the improper use of methylene-blue and especially salol in the treatment of so-called "clap," cystitis, rheumatism and other diseases. It is evidently true that

these various phenol compounds directly and indirectly kill every year their thousands. Unfortunately no statistics are available to prove the above statement.

GEO. S. WILSON.

Boston, Mass.

[To one class of phenol compounds the doctor's criticism certainly will not apply—the sulphocarbolates. We have never known of a case where their use did harm to the kidneys, on the contrary, we are convinced that by reducing intestinal toxemia, thus preventing the formation of poisons to be eliminated by the renal tract, the use of these salts actually prevents nephritic complications. That's our experience.—ED.]

#### NOT A CONVERT—BUT LIKES US JUST THE SAME

I have read the January number of your journal with much interest. Although not a convert to alkalometry, one cannot help but admire the dynamics, the splendid energy and vim that lies behind its origination; and, too, the broad charity that seems to pervade its pages towards your fellow creatures of the order of Esculapius. I cannot longer withhold my congratulations. Wishing you success, if you are right, Doctor (which is hard to disbelieve), I am,

Yours most truly,

F. B. CULLENS.

Ozark, Ala.

[That's a sample. There are dozens of them. Hundreds of them. See the cover "mortise" this month. We wouldn't be just human if our hearts didn't warm to friendly, encouraging letters like these.—ED.]

#### NOTE: A MAILING LIST

Dr. Waugh is preparing a mailing list of his friends and former students to whom he can send reprints, etc. Any reader of CLINICAL MEDICINE who desires to have his name placed on this list, can do so by sending the name and address to Dr. Waugh, at this office.



## CLINICAL · MEDICINE POST-GRADUATE SCHOOL of THERAPEUTICS

George F. Butler, M. D., Director  
Thomas J. Mays, M. D.  
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.  
William F. Vaughn, A. M., M. D.  
Alfred S. Burdick, A. B., M. D.

### PART I.—LESSON TWO

#### ACTION OF REMEDIES

##### LOCAL MEDICATION

##### Irritation and Counterirritation.—

There are certain agents which are capable of exciting activity (and especially vascular activity) in a part, when they are applied locally, and which are used to relieve some abnormal action going on elsewhere within the body. This artificially excited action was formerly supposed to relieve the severity and reduce or shorten the course of the preexisting malady. This method of treatment has been denominated variously, according to circumstances, as *irritation* and *counterirritation*.

**Action on Circulation.**—Any dilation of the cutaneous branches and increased blood-flow in their superficial distribution will directly diminish the volume of the blood-current in the deep-seated vessels. After inflammation of the pleura, at least of the costal pleura, the application of irritants to the skin of the chest, such as heat or vesicatories, will dilate the cutaneous terminations of the intercostal arteries, and at the same time diminish the blood-supply to the *pleural* arterioles, thus lessening the vascularity of the inflamed areas.

In the same way dilation of the cutaneous vessels over an articulation will be followed by lessening of the blood-flow in the *articular*

branches, and in the arterial trunk common to both.

We all know that plunging one hand into cold water will lower the temperature of the other hand. The more fully we can comprehend this the better can we understand how it may be that from external counterirritation we may derive a beneficial effect in cases of internal inflammation, even when the vascular supply of the inflamed parts is not derived from the same arterial trunks as is that of the cutaneous surface operated upon.

Cutaneous irritants affect the circulation generally, probably as follows: (1) A direct stimulant effect downward to the heart. (2) An effect upon the peripheral arterioles, by dilating them and lowering the blood-pressure in the arteries, thus enabling the heart to contract more easily in the face of a lessened resistance.

**Action on Nervous System.**—In the articulation the deep-seated and cutaneous nerves spring from common trunks; consequently the application of analgesic agents to the peripheral extremities of the superficial distribution exercises some kind of effect upon the deep-seated terminations. That such is the fact is unquestionable, but it is not yet clear how this end is brought

about. Either there is some reflex action induced or some deadening effect is achieved which counteracts the pain—producing irritation of the deeply seated terminal fibers, possibly in the common trunk.

The application of the *epispastics* to large areas of the surface for a brief time (so that they are rubefacients rather than vesicants) in cases of collapse, shock, or even the typhoid condition, is a well-established practice. Dermal irritants act as general stimulants, and they are indicated in states of depression rather than in advanced exhaustion; their application should be brief and accompanied by the exhibition of other stimulants somewhat freely given.

### THE COUNTERIRRITANTS

**Caustics** are medicines which destroy the tissues to which they are applied. They incite inflammation and vascular dilation in surrounding areas. Caustics are employed, first, to destroy excrescences on the skin and mucous membranes, and to effect the destruction or removal of malignant growths; second, to open abscesses, or to maintain a chronic irritation, or to stimulate ulcers, etc.; third, to destroy and prevent the absorption of the virus from the bites of rabid and venomous animals, and for the destruction of chancres and malignant pustules.

The following caustics act by *extracting the water* from the tissues: Arsenous acid, antimony chloride, carbolic acid, chromic acid, caustic potassa, caustic soda, mineral acids.

The following caustics act by *combining with the albumin* of the tissues: Burnt alum, copper sulphate, mercuric chloride, mercuric nitrate, mercuric oxide, silver nitrate, zinc chloride and zinc sulphate. Bromine acts by corrosive oxidation.

**Vesicants and Epispastics** excite more or less local inflammation when applied to the skin, the inflammatory condition being accompanied by an effusion of serum between the epidermis and dermis, that is, a blister. The principal vesicants are acetic acid, confined vapor of ammonia, cantharides, iodine, volatile oil of mustard,

thus toxicodendron. Blisters are of use in rheumatic arthritis, endocarditis, sciatica, pleuritis, chronic pericarditis, neuralgia and many painful conditions.

**Pustulants.**—There are certain drugs which affect certain parts of the skin, for instance the orifices of the sudoriferous glands, in a special manner, and their action on these parts is such as to give rise to pustules rather than blisters. Drugs which affect the skin in this manner are called "pustulants." The following are the most important: Croton oil, silver nitrate and euphorbium. These are employed as local stimulants in chronic ulcers and facilitate the absorption of effusions, as in chronic synovitis or chronic stiffening of the joints. Pustulants are particularly employed to maintain a continuous though moderate irritation in chronic inflammations. They are used for the same class of cases as vesicants, but are preferable when it is desirable to prolong the local irritation without exciting so much inflammation.

**Contraindications.**—*Vesicants* are contra-indicated usually in acute inflammations and in inflammations of the cutaneous tissues. Vesicants are not permissible in pregnancy, debility, purpura, or in extreme infancy or old age. They should not be applied over the scrotum or the mammary glands, or over bony prominences where the healing processes are apt to be retarded.

**Rubefacients** are drugs which, when locally applied, are intended to produce temporary redness and congestion of the skin. Some of them are vesicants if applied in full strength, and if their contact with the skin be sufficiently prolonged, vesication or even total destruction of the tissues may result.

The following are the principal rubefacient drugs: Ammonia, alcohol, arnica, camphor, capsicum, chloroform, ether, iodine, menthol, mezereon, mustard, oil of cajeput, oil of turpentine, volatile oils. Hot water and friction are also rubefacient agents. Rubefacients are used for their influence upon the skin itself, or for their effect on deep-seated structures. They are

efficient means of relieving neuralgic pains, conditions of nervous debility, nervous excitement, fatigue, and as an aid in narcotic poisoning, also to hasten the absorption of inflammatory exudates, to remove the swelling and restore the function of chronically inflamed joints, etc. Rubefacients should be applied with friction, as rubbing of the skin aids the action of many of them.

#### THE SKIN SEDATIVES

**Emollients** are substances which soften, relax and protect the tissues to which they are applied. They relieve pain and tension by diminishing heat and lessening the pressure on the nerves. The principal emollients are: glycerin, liniments, fats and oils, hot fomentations and poultices.

**Demulcents** are substances which soothe and protect the part to which they are applied. They are generally of a mucilaginous nature, and they are employed for their action upon the mucous membranes; while emollients are principally used upon the skin. Some of the important demulcents are flaxseed, slippery elm, marshmallow, licorice, sassafras-pith, etc.

Both emollients and demulcents are exceedingly useful agents to relieve irritation of the skin, in certain cutaneous diseases, by softening the skin and mucous membranes. They also prevent cracking or chapping from exposure to cold. They are also efficient agents to prevent bedsores.

Demulcents are employed internally with good results when there is an irritated or inflamed mucous membrane, whether of the respiratory, gastrointestinal or genito-urinary tracts, as in bronchitis, gastritis, diarrhea, dysentery, cystitis, etc. Such demulcents as flaxseed, slippery elm, marshmallow, are very agreeable and efficient agents to quench thirst and to relieve irritation of the mucous surfaces in febrile affections.

**Protectives** are agents to cover and protect mechanically diseased surfaces from air, water, etc. Such agents classed as protectives are employed for their absorptive power of taking up by capillary attraction

any moisture or fluid present. They are useful agents as protective coatings to bedsores. The principal protectives are collodion, solution of guttapercha, solution of sodium salicylate, courtplaster and lycopodium.

The only official *cataplasm* or *poultice* is cataplasm of kaolin.

#### HOW TO MAKE AND APPLY A POULTICE

When a poultice is applied directly to the skin it must be allowed to become a little cool before the patient can bear it, and thus half of its advantage is lost. In order to relieve spasm, as in colic—intestinal, biliary or renal—to relieve inflammation of the pleura, the lungs, the liver and the other organs, we want to apply the poultice as hot as possible, while we protect the skin from being scalded.

In order to do this, especially when a linseed-meal poultice is used, a flannel bag should be prepared (a convenient size being 12 inches by 8 inches). This should be closed at three edges and open at the fourth; one side of it should be about one inch or one and one-half inch longer than the other. It is convenient also to have four tapes attached at the points which form the corners when the bag is closed, in order to keep the poultice in position. Besides this another strip of flannel should be prepared, the same breadth as the length of the bag, and long enough to wrap around it once or oftener.

Cracked linseed, bowl and spoon should then be got together, and the spoon and bowl thoroughly heated by means of boiling water. The poultice should then be made with fully boiling water, and rather soft. As soon as it is ready it should be poured into the bag, previously warmed by holding it to the fire; the flap which is formed by the longest side of the bag should now be turned down and fastened in place by a few long stitches with a needle and thread. It should then be quickly wrapped in the strip of flannel and fastened. It may be covered outside with a sheet of cotton-wool.

In this way the poultice may be applied boiling hot to the skin without burning;

the two layers of flannel allow the heat to pass gradually to the skin. As the moisture of the poultice soaks through them they become better conductors and the heat passes more quickly, but the increase is so gradual as not to cause any painful sensation whatever, but only one of soothing and comfort. In case the patient is very sensitive the nurse should rapidly pass a hand underneath the poultice from end to end, briskly rubbing the skin in this movement, repeating this until the first shock to the cuticle nerves has subsided. This rubbing and temporary cooling of the skin helps wonderfully to get the frightened patient—especially if a child—accustomed to the heat. The poultice thus prepared naturally keeps hot much longer, and the necessity for changing it is less frequent. The heat is still longer maintained by covering it over with oiled silk and folded flannel.

The difference between a poultice made in the ordinary way and in the manner just described is sometimes exceedingly striking. Its value is, perhaps, less marked in cases of inflammation than in those of spasm. We have seen patients suffering from intense abdominal pain, that were at once relieved by a poultice made in the way just described, although a succession of poultices made in the ordinary way had been utterly useless.

This way of making poultices is one of the minutiae of medical practice. It is now generally believed better practice to use the official cataplasm of kaolin than poultices of linseed meal, or bread, or other substances which may be full of germs and infect the individual. A linseed-meal poultice, however, prepared in the way above described, is of great value in many cases where poultices are indicated.

**Fatty and Oily Substances** may be used for either nutritive or soothing, or stimulating effects.

To the first and second classes belong codliver, lard, olive, almond, linseed, neats-foot, castor and similar oils. To the third class, the oils of tar, of cade, of white birch, and of juniper. They are applied either to the skin directly by pouring or by friction,

or by the mediation of compresses, bandages, etc., which are saturated or spread with the material to be applied.

Fatty substances are also applied in the form of ointments or pomades. They are compounded with various medicinal substances, according to the requirement of each case, such as the salts of mercury, zinc, copper and lead; and sulphur, chrysarobin, phenol, hyposulphurous acid, camphor, iodoform, balsam of Peru, extracts of opium, belladonna, etc. The products of petroleum refinement known as petrolatum, vaseline and cosmoline, though not true fats, are increasingly employed for similar purposes. These mineral fats, or paraffins, are particularly useful as vehicles for ointments for application on the various parts of the body, such as the scalp, when a more consistent salve pastes the hair to the surface in an unsightly mass.

**Unguenta** (*ointments*) are fatty substances intended to be applied to the skin by inunction. They are either soft or solid at ordinary temperatures but liquid upon being rubbed into the skin. They are generally rubbed over the skin, or may be rubbed into it. The medicating ingredients are combined with a vehicle of lard, lanolin or similar substance.

Ointments are made in several ways: first by fusion, second by incorporation, third by chemical reaction. Lard and hydrous woolfat are the best vehicles for an ointment when the active ingredients are to be absorbed. When the ointment is required for a protective, as for open wounds, soft paraffin, i. e., petrolatum, is a good vehicle, as it softens less at the temperature of the body. Benzoinated lard is often used to obviate rancidity. No ointment should be dispensed that is at all rancid. It should always be smooth and free from grittiness or irritating properties.

**Glycerin** is sometimes made use of as a component part of lotions and ointments. It should never be applied in its pure state to the skin, because it is too irritating. It is however very useful when diluted or added to lotions or ointments. When combined with starch it makes a series of com-

binations known as glyceroles, or glycerolates. These are pasty, semisolid substances which are capable of varied medication, as in the glycerole of the subacetate of lead. They are employed chiefly as protectives of the surface. Glycerin when used in a fluid soap is an exceedingly valuable agent when a milder effect is desired than is produced by the spirit of soap. Glycerin is also combined, in various proportions, with gelatin to form a substance known as *glycerogelatin*. This is used as a vehicle for the application of remedies to the skin.

**Pastes** are prepared with kaolin, gum, lead, dextrin, glycerin, and other substances. They are especially valuable in the exudative affections where salves are often either not well tolerated or actually prove irritating to the skin. Pastes when applied to such surfaces form a protective and adhesive dressing, which may be medicated as desired. Hyde gives the following details respecting the availability of pastes for different ingredients:

Lead is best used as an acetate, either in a simple paste or with dextrin; the carbonate, oleate and iodide combining well with both. Zinc oxide combines well with kaolin, lead, lard, starch, dextrin and gum. Sulphur combines well with the three last-named, poorly with kaolin, and not at all with lead. Ichthyol suits well with all save with the gum pastes. Naphthol, calomel, corrosive sublimate, red and white precipitate, carbolic acid, chloral hydrate, camphor and salicylic acid can be incorporated with all, the last-named in smaller proportion with gum paste.

Tar is better united with starch, dextrin and gum than with the others. Iodine and iodoform naturally do not suit well with the starch and dextrin pastes. Chrysarobin and pyrogallol unite with kaolin and gum pastes, but acids in general destroy the adhesiveness of the gum pastes and should not be added to them. Fatty and soapy substances, if commingled in large amounts with these pastes, injure their special properties. The following formulas for special pastes are given:

#### *Formulas for Special Pastes*

1. Kaolin, glycerin, of each 30 parts; zinc oxide, solution of subacetate of lead, of each 20 parts.

2. Zinc oxide, 40 parts; red oxide of mercury, 2 parts; mucilage of acacia, glycerin, of each 20 parts.

3. Prepared chalk, sulphur (sublimed), of each 2 parts; liquid tar, 8 parts; starch, 20 parts; mucilage of acacia, glycerin, of each 15 parts.

4. Salicylic acid, 20 parts; glycerin, 20 parts; mucilage of acacia, 30 parts; castor oil, 10 parts.

**Oleates** are solutions of oleates or alkaloïds in oleic acid. They are intended for endermic medication. They are applied by inunction, when the oleic acid favors the absorption of the medicinal agent, the oleate, in solution. When it is not desirable to administer remedies by the mouth, the oleates afford an effective form of medication. The solid oleates are either dry powders, well adapted for protectives, or dusting powders, or soft, pliable masses to be applied in the form of ointments or plasters.

The U. S. P. contains five: Oleate of atropine, 2 percent of atropine; oleate of cocaine, 5 percent; oleate of mercury, 25 percent of yellow mercuric oxide; oleate of quinine, 25 percent; oleate of veratrine, 2 percent.

**Emplastra (plasters)**, are mixtures of various fatty or resinous solids of such high melting point as to be sometimes almost friable when cold, but rendered adhesive by the warmth of the body. The vehicles of plasters are lead plaster; resinous substances made adhesive by admixture with the medicinal ingredients; and simple plasters, such as those made with gelatin. The making of plasters generally does not differ materially from the process employed for ointments and cerates, since they are prepared by melting the various substances and incorporating the medicinal substance last. Lead plaster, however, is prepared by boiling together lead oxide with an oil until saponification is completed, the result being an oleopalmitate of lead and free

glycerin. Plasters are employed when it is desired to exert a more or less continuous effect upon the skin, and are thus necessarily consistent and desirable.

**Plaster-Mull** is a thin cloth made impervious with rubber or gutta-percha tissue, upon which is spread or painted a medicinal agent in liquid form. It is intended for local application. These plaster-mulls are efficacious and, as a rule, well liked by patients.

**Collodions** are solutions in ether or ether-alcohol (also acetone) of pyroxylin, i. e., soluble guncotton. Upon evaporation of the solvent the remaining film excludes the air, thus protecting the abraded surfaces. Collodion is used also as a vehicle when a prolonged local effect is desired. It not only protects but contracts the surface of the skin to which the application is made. By the use of collodion special mixtures, such as bismuth, cantharides, oxide of zinc, white precipitate, iodine, and other substances may with advantage be applied to the surface and the action of each application definitely limited to the margins of a single patch of disease. The addition of 2 percent of castor oil yields the so-called flexible collodion. Solutions of india-rubber are similarly employed.

**Dusting Powders** are used to protect the surface of the skin or to produce an astringent or antipruritic effect. Dusting powders are usually composed of starch, magnesia, lycopodium, bismuth subnitrate, boric acid, and similar substances. As absorbent powders the starchy substances are open to the objection of forming little pasty rolls or cakes when wet with serum or sweat. Lycopodium, which is seen under the microscope to consist of irregularly globular pollen sporules, never behaves in this way, and is for that reason deservedly popular. *Stearates* are combinations of zinc oxide and lead oxide with stearic acid, in powdered form; useful as dusting powders.

#### EXTERNAL METHODS OF APPLICATION

In order to utilize the absorptive power of the cutaneous surface for therapeutic purposes various methods have been adopted:

The skin possesses two pathways for the absorption of drugs, namely, through the epidermis and through the cutaneous glands. Whether drugs actually penetrate the epidermis is very doubtful, and it is found that the more effectual ways of securing absorption through the skin are those which appear most likely to draw the drug into the interior of the cutaneous glands, such as inunction with mercurial ointment; exposure of the skin to the vapor of calomel fumigation; or solution of the drug in chloroform as a liniment, or with one of the oleates. By these modes of administration we avoid any disturbing influence of the drug on the digestive organs, and young children can be easily put under treatment. The disadvantages consist in the uncertainty of the drug itself, and in the unpleasantness of greasy and sometimes dirty applications to a large surface of skin.

The following means are usually adopted for securing cutaneous absorption: Fumigation; inunction of ointment or liniment; endermic, by means of the application of blisters to a surface; and by means of a hypodermic needle and syringe—the hypodermic method. These are usually effectual ways.

Plasters continually applied, medicated poultices and fomentations: These are the doubtful ways.

**Inunction** consists in an outward application of the medicinal agent, without abrasion of the cutis, and forced absorption through the process of “rubbing in.” The horny epidermis, however, presents an effectual barrier to the absorption of many drugs, and the endermic method has been found more active. This plan consists in producing, by means of a blister, a raw surface which readily absorbs the medicinal agent—morphine, strychnine, atropine, quinine, etc.—with highly marked effect. The process is somewhat painful, and necessarily slow in action, being now almost wholly superseded by the hypodermic method. The blister raised by ammonia offers much less resistance to absorption than that induced by cantharides.



**Fumigation.**—Mercurial fumigations are very successful in syphilis. Calomel, which is prescribed in most cases, gives constant results. Some employ dry fumigation; others maintain that the therapeutic effects of mercury are increased by steam. This mode of administering mercury is considered by many physicians the best and surest way of eradicating syphilis. Moreover, it affects the general health less deleteriously, disturbing neither the functions of the stomach nor of the intestines. Ten to twenty grains of calomel are used at each fumigation. The fumigations sometimes produce so much weakness and prostration that they cannot be continued. There can be no doubt that many cases of syphilis, rebellious to other treatment, yield to these fumigations. Sometimes only a portion of the body affected with syphilitic rash is subjected to calomel fumigation.

### INTERNAL MEDICATION

#### Theory of the Therapeutic Drug Action

It was once said that the practice of medicine consisted in "bleeding down to the brandy-point, and brandying up to the bleeding-point."

**Sedation and Stimulation.**—In one shape or other this doctrine of sedation and stimulation, the incitation or the depression of some one or more of the vital functions, of the activity of one or the other set of cellular structures of our bodies, constitutes the fundamental conception of therapeutic action. The ingenuity of successive writers has been expended in devising new terms in which to express their conception rather than in spinning new theories or making new investigations.

The enormous importance to be ascribed to the caliber, and consequently the capacity of the blood-vessels, has given rise to the hypothesis of the existence of vasomotor nerves, vasoconstrictor, vasodilator, or both. No anatomist has as yet demonstrated the presence of these nerves. The action of very minute doses of atropine and of morphine in aiding the relief of constipation has led to the no less conjectural hypothesis of the existence of an inhibitory system,

which being paralyzed by these minute doses, that suppositious obstacles to the free action of the bowels is removed.

We find applied therapeutics ready, therefore, to avail itself of every new advance that is made in physiology, and even to keep a little ahead of it if desired, and to show the way in which investigation may prove remunerative.

**Exceptions to the Rule of Sedation and Stimulation.**—An exception to this rule of action as to sedation and stimulation of the vital functions, may be found in the case of drugs which act through their chemical properties. This may be also said of a variety of local actions. Local action, it must be remembered, may go on upon the surface of the body, in the alimentary canal, within the blood-vessels, and even in the tissues.

**Germicidal Action.**—Another exception lies in the action of remedies upon parasitic organisms. This may also be termed a local action, possibly germicidal. Nevertheless, we are not clear as to the rationale of "germicidal" remedies, since these may possibly act directly and by intoxication destroy the parasite, or through chemical action, as glycerin destroys the embryos of the trichina. Or they may act by inhibiting some of the functions of micro-organisms; such as their reproduction, toxin-production, etc. Or again, they may act by increasing in some unknown manner the vital resistance of the tissues, or by chemically or otherwise neutralizing the toxins, or in some other as yet unknown and unsuspected manner.

**Insufficient Observations.**—At every step in our inquiry on drug-action we are faced by the difficulty that observation of these agents has not been pushed sufficiently. Take for instance the action of tencides: Even now it has not been definitely determined whether these remedies act upon the parasite or upon its host. What are we to do when we find that a child of two years harbors a tapeworm? If our remedies act upon the worm, it will require as much of a dose to destroy that worm in the child as in an adult. If they act on and through

the vital organs of the child, the dose should be regulated by the child's age, as with other remedies which are known to act through the vital functions. That so simple a point as this should still be unsettled shows how superficial and imperfect has been the study of drug-action.

**Animal Experimentation and Clinical Observation.**—Much of our knowledge of drugs has come through experiments performed upon animals; but in every case the results of such experiments must be confirmed and corrected by clinical trials upon human individuals before they can be made of practical utility. Otherwise we should be compelled to consider that morphine is comparatively harmless in any dose and that arsenic is only a useful and harmless cathartic, as dogs have received from 4 to 8 grains of morphine without apparent effect of any sort, and the only result following the administration to them of huge doses of arsenic has been laxation.

Much information has also been obtained from the administration of drugs to human beings while in health. Here also it is a question as to the exactness of this knowledge, as related to its application in states of disease; for it does not necessarily follow that a drug having a certain action in the state of health has the same action in disease conditions. For instance, digitalis may exhibit no action whatever if given to a healthy individual, whereas, when given in proper doses to a person suffering with any form of heart-disease which is amenable to its action, the effects are unmistakable.

Of some remedies lying on the borderland of therapeutics it is strongly asserted that they have no effect in health, but that they exert a powerful effect in certain conditions of disease. Among these we may mention echinacea. As yet its advocates have been unable to show any effect whatever when it is administered to a healthy individual; but in many conditions, such as that resulting from the bite of a venomous serpent, its effects are claimed to be remedial in a striking and unmistakable manner.

This leads us to the principal difficulty we encounter in the study of this recondite topic,

namely, that the physiologic experiments—that is, experiments made upon human beings in the state of health—on which our therapeutic classics were based, are with few exceptions not of recent date, but were made at a time when physiology had not progressed to the point it has now reached. These observations were usually limited to the circulation, temperature and respiration; in general, if these important functions were not perceptibly affected by the remedy, it was hastily pronounced “inert.”

As an instance of what modern conditions demand in the testing of remedies we will cite the case of boldine. It has been found that when this remedy is administered in effective doses, it causes a marked increase in the excretion of urea. This points to the desirability of careful examinations of the urine for information as to the total daily excretion of each of its principal constituents, before, during, and after the administration of any remedy on trial. Such observations would be of inestimable value to us at present, now that it is understood that the study of the composition of the urine affords, somewhat similar information to that gathered from the inspection of the index of a volume.

**The Internal Secretions.**—The study of the internal secretions threatens to revolutionize physiology; and we must remember the position in which this matter stood, and still stands, in relation to our knowledge of the cell and of cell-action. The conclusions reached by Dr. Sajous, after enormous labor in research, correlation and deduction, from many works gathered from many widely scattered sources, bid fair to change the entire basis of our conception of physiologic function, and consequently of therapeutics.

The profundity of Sajous's work necessarily impedes its speedy acceptance, or even its serious consideration; for the number of those capable of comprehending it, and even giving the requisite time to it, is small. But the least that can be said by any capable observer who has examined his theory is, that Sajous has earned the right to a hearing; and this ensures the acceptance of what is assimilable in due time. An article upon

Dr. Sajous's theories will appear in *CLINICAL MEDICINE* next month.—ED.]

**Drugs Must be in Solution.**—As recently pointed out in a thoughtful article by Dr. Joseph Clements, drugs act only through the vital functions. Drugs do not act as such on a dead body; life is essential to their activity. But how do they act?

In the first place it is evident that to become active, drugs must be in solution. Calomel may lie for weeks or months in the intestines, inert, with no action whatever; but when enough of it has been rendered soluble by chemical change its activity will be manifested.

Drugs taken into the alimentary canal must, therefore, first be rendered soluble, then they must be absorbed. It cannot truly be said that drugs are within the vital body of the patient at all, until they have left the alimentary canal and been absorbed into the circulation. When they have entered the circulation, they are carried by it to every part of the human body, to every single cell constituting our organism.

**Selective Cell Action.**—Innumerable substances are carried in this common circulation, to every cell of the body. Each of these cells absorbs from the circulation supplied to it such elements as it requires for its own needs, and these we usually term foods. But what is a food? It is that which that part of the body requires to restore it to that normal equilibrium which we term health. This need may be for a particle of oxygen, of lime, of iron, of fat, of any one of the innumerable substances supplied by our daily food. In the case of some of these, such as iron, lime, etc., we find it impossible to reply to the question as to whether these would be denominated foods or medicines. The closer we look for a dividing line, the more difficult it is to detect it.

Suppose we find that a group of cells in the body is defective in tonicity and we supply through the circulating fluid strychnine enough to restore their tonicity. Suppose, on the contrary, that another group of cells is possessed of an excessive tonicity, and is in a contracted or spastic condition, and we supply aconitine through the blood. The

spastic cell will take up a molecule of the drug, enough to remove the abnormal spasticity, and restore the physiologic balance.

To a certain extent, we believe, each cell of the body takes up what it needs and rejects what it does not need. Since there may be cells in the body which require the relaxant principle, and others which require tonicity, these two antagonistic remedies may be supplied in the same circulating fluid, and each cell will take up that which it wants, and reject that which it does not require.

We do not offer this as a demonstrated or demonstrable truth, but simply as a working hypothesis to explain certain clinical phenomena for which no other explanation has ever been vouchsafed.

But, we are asked, how do we account for poisoning? For it is evident that the remedial principle furnished to the blood may be taken up to such an extent as to occasion poisoning, with its symptoms. The difficulty, however, vanishes on closer inspection. Too much food may be taken up into the blood, and supplied to the tissues; too much water; too much salt; too much alkali; too much aconite. If the blood is surcharged to a certain extent with any principal food or medicine, the pressure from the blood upon the cells may be sufficient to compel the latter to imbibe more than they require, and then we have poisoning resultant.

In actual practice this difficulty is prevented by close observation on the part of the physician, whose duty it is, when any remedy is indicated in a case, to administer of that remedy just enough to secure normal equilibration, and not excess.

Our reasoning in this matter leads directly up to the point at which Virchow arrived, when he attributed to the cells of our body an independent conscious existence. In other words, he looked upon each cell as an independent volitional conscious being, the body being such an aggregation of these cells as might be represented by comparing it to an empire.

**Intestinal Toxemia.**—The more closely one studies the symptomatology of disease,

at the bedside, in the patient and not in the textbook, especially with the assistance of the modern scientific laboratory, the more deeply will he be impressed with the truth that an enormous percentage of disease as existing in the human being is directly or ultimately to be ascribed to the presence of toxic matters circulating in the blood. These toxic matters may be derived from the food we consume, from the decomposition of retained fecal matter in the alimentary canal, from the tissue-metabolism, or from outside sources, as from the inhalation of sewer- and other toxic-gases. To stop the inhibition of these substances and to rid the system of those already clogging it, circulating in the blood or stored in the cells of the various tissues, is the primary and one of the most important duties of the physician. In fact it is a fundamental law of therapeutics underlying the whole of our practice.

### Three Fundamental Conceptions.—

These three conceptions underlie nearly the entire field of therapeutics: First, the incitation or the sedation of the various vital functions; second, combating invading parasites, directly or indirectly; third, elimination.

Other modes of drug-action are exceptional, and of infinitely less importance than they used to be considered.

**Large and Small Doses.**—Each new investigation of drug-action seems to bring out more prominently, and to extend to wider generality, the theory which attributes a direct antagonism to minute and to large or maximum doses of remedies. We may confidently assert now that this law is universal; and that the primary effect of minute doses of all remedies is stimulating, and that the effect of maximum or toxic doses is sedative. This has been brought prominently forward by a recent publication of Prof. T. J. Mays, who showed its applicability in many cases where it was not hitherto suspected; and has added the astonishing observation that the stimulating effect of minute doses may almost completely counteract the paralyzing effects of maximum doses. In this connection read carefully Dr. Mays' article in January CLINICAL

MEDICINE on the relation of the molecular weight and boiling point to toxicity.

### PHYSIOTHERAPY

In our introductory chapter we gave a classification of physical therapeutic agents. We recognized four distinct divisions, to wit: physiological, physical, mechanical, physiochemical. Under the different heads we indicated briefly the characteristic features of each. Thus we stated that a physiologic therapeutic agent is "a force which is contained and constantly at work in the living animal body." It is, therefore, a part of that ever-active, health-preserving, damage-repairing, health-restoring machinery in the human organism whose collective function the older physicians designated as the *vis medicatrix naturæ*. Inasmuch as the knowledge thereof in its manifold aspects and relations to health (disease) is, to all intents and purposes, the understanding of physiology (pathology), the clinical application of these inherent therapeutic agencies has been referred to as "physiologic" therapy. In this accurately defined, exact sense the term is proper. The impropriety in the use of this term came with the habit of including all nonmedicinal therapeutic agents under this head. In this wide and uncertain sense the term is a misnomer.

In arousing one of these latent forces in the human economy and directing its activity toward a certain end, it is oftentimes necessary to make use of auxiliaries that are extraneous to the body and in no way connected with the physiological machinery of the organism. To explain:

If we make an application of hot water to any part of the body, the effect would be an active hyperemia of the part. The increased arterial supply would be synonymous with better nutrition. Every functioning structure (e. g., the glands) would receive a larger share and a better quality of nutriment (i. e., fresh blood), and would as a necessary physiological result be better able and ready to perform its respective function. Thus the circulation would be more active, nutrition more perfect, metabolism more energetic, absorption and excretion more intense. All these effects are strictly physiological, but

they are dependent on and secondary to an extraneous physical agency, namely, an application of hot water.

The *heat* of the water is the therapeutic agent that is directly responsible for the physiologic effects produced. The water, as the carrier of the heat, is purely an accidental physical medium and bears no causal relation to the physiological effects of the heat. Here we have an illustration that aptly shows the essential characteristics of physiological and physical therapeutic agents and the differences between them. To understand these characteristics and to be able to differentiate between *physiological* and *physical* therapeutic agents is of the greatest importance. The example quoted above illustrates the dual (physiologic and physical) character of hydrotherapy. In order to learn the theory of physiologic therapy without burdening the mind with endless speculations, we will take up the study of hydrotherapy, the most generally useful of all the drugless therapeutic agents.

#### HYDROTHERAPY (THERAPY OF WATER)

The uses of water in medicine are known as hydrotherapeutic, or hydriatic, applications. Strictly speaking, they refer to the external as well as to the internal employment of water in any degree of aggregation (vapor, steam, water, ice). They include all degrees of temperature, from intense cold to intense heat. They comprise all modes of application (bathing of all kind, douches, uses of sheets, rubber bags, sponges, etc., etc.). The meaning of the term "hydrotherapy," however, has in recent times been much narrowed by usage. It refers usually to the external uses of water in any state of aggregation.

**Hydrotherapy and Thermotherapy.**—Inasmuch as many of the effects produced by hydriatic applications are due to the degree of temperature carried by the water and since it is in many instances the effect of high temperature (any degree above 70°F.) that is involved in the therapeutic object to be accomplished, usage has sanctioned the synonymous use of the two terms "hydrotherapy" and "thermotherapy" in

the conditional sense suggested. Strictly speaking, there is no justification in this lack of accuracy of definition.

Hydrotherapy refers to the use of water, irrespective of the temperature.

Thermotherapy suggests the clinical uses of warmth or heat, irrespective of the medium or carrier of the temperature.

This medium is not necessarily water. It may be air, or, for that matter, any substance capable of retaining warmth as heat. Thus, in the strictly scientific application of the term, the uses of a dry-heat cylinder do not belong under the head of hydrotherapy, although not a few writers, for the sake of convenience, discuss the uses of dry heat under the caption of hydrotherapy. It would likewise be manifestly improper to speak of the use of a dry hot blanket or sheet or of a hot flaxseed poultice as a hydrotherapeutic application. The latter term is only proper when water is the carrier of the temperature.

**Water only a Force Carrier.**—Water, *per se*, in its external applications, has no therapeutic significance. Its effects are due to the activity of forces or agencies of which it happens to be the accidental and convenient carrier. The most important of these forces is, as has already been suggested, temperature of variable degree. Another force is the product of the bulk or weight represented by a given quantity of water and the action of such bulk or weight on the body or on any portion of the body-surface. The pressure of the weight of water on the skin acts mechanically and is analogous to other mechanical agents, e. g., massage. The effect of pressure on the vasomotor nerves of the surface and on the blood-pressure in the regions treated and even in the contiguous territory are in many instances equal in importance to any action which may be attributed to the temperature of the water.

**Physiological Effects of Heat and Cold.**—If we take a piece of ice and place it on any part of the body surface, certain characteristic effects are produced. The intense cold will cause a contraction of the part *en masse*. In this respect the tissues

of the body do not differ from other matter, organic or inorganic. Wood, metal, stone will contract if exposed to intense cold. If we remove the piece of ice from the part to which it has been applied, we can verify the contracting effect by the shrunken and blanched appearance of the part. In the living human body this effect, however, does not last. Within a few moments after the piece of ice has been removed, the part will begin to look full, the cuticle gradually assuming a rosy hue. The redness will show wherever the ice has been in contact with the skin. If the piece of ice has been triangular in shape, the area of redness will be an exact reproduction of this shape.

Why does the skin look red? What has taken place? The vasomotors of the skin, in response to the action of cold, have caused the arterioles within the domain of their control to contract. Thus arterial pressure is lowered in the region concerned, the quantity of blood is diminished, the heat of oxidation is reduced and a comparative stagnation in the metabolic activity of the region supervenes.

The ice having been removed, what happens? Action is followed by reaction, suboxidation by superoxidation. The depression of vasomotor control in the region treated gives way to a corresponding deviation in the opposite direction, an elevation or, to use a familiar and frequently misapplied term, a stimulation. The pendulum swings beyond the center. The arteries not only return to the normal capacity of their lumen, but get beyond it, they dilate and a corresponding increase in the amount of arterial blood takes place. The region treated will be more active in its metabolic, absorbent and excretory functions than under normal conditions. Eventually the condition of "stimulation" will pass off, the amounts of arterial blood will lessen and return to normal conditions of quantity and pressure.

#### **Primary and Secondary Anemia.—**

The example quoted contains the fundamental principles of hydrotherapy. First we have the anemia produced by the lay-

ing on of the ice. This condition hydrotherapeutists call primary anemia. This is eventually followed by great increase in the blood-supply, called hyperemia. That physiological phenomenon which is interposed between primary anemia and secondary hyperemia is the pivotal point upon which the practical effects of hydrotherapeutic applications hinge. It is the eternally necessary factor in hydrotherapeutic practice and is called reaction. Without this physiological impulse, which causes the vasomotor pendulum to swing beyond the center and forces the hyperemia to compensate for the anemia, the practice of hydrotherapy would be impossible. Let us remember this great fundamental fact for all time to come.

#### **Primary and Secondary Hyperemia.**

—When primary anemia supervenes, the actual quantity in the blood-mass of the region concerned is lessened. What becomes of the blood which is forced out of the part by the action of cold? It is, of course, taken up by the deeper contiguous tissues which in this way experience a coincident increase in their blood-supply—a hyperemia. This coincident increase in the amount of blood is called by hydrotherapeutists primary hyperemia. When secondary hyperemia in the cutaneous vessels has taken place, it is clear that the neighboring tissues or deeper structures lose a part of their blood-mass. Thus we have a secondary anemia established in these parts. These points are of the greatest practical import and should be thoroughly understood.

To recapitulate: Anemia in the primary area (i. e., the part where the primary contracting effect occurs) is coincident with hyperemia in the secondary area (i. e., the part where the surplus of blood from the primary area is received. Likewise there is a hyperemia in the primary area and coincidentally anemia in the secondary area after *reaction* has taken place. All these phenomena are due to impressions made on the vasomotors.

**The Sensory Response.**—The sensory nerves also share in the physiological re-

sponse to the action of heat or cold. They communicate to the system at large distinct sensation of heat or cold within certain thermometric limits. Below a certain degree of cold or beyond a certain degree of heat no impressions of a definable character are received by the sensory nerves. The impressions are merely sensations of pain. It is only moderate degrees of high or low temperature that can be differentiated by the sensory nerves. The sensations of heat, of cold, as registered by the sensory nerves are suggestive of the tolerance of the animal body in that they indicate the thermometric limits within which animal life is possible. Degrees of intense heat or cold that cannot be differentiated by the sensory nerves and are simply received as sensations of pain are incompatible with the integrity of the animal body and are, therefore, distinctly destructive to whatever part they are applied.

Through the instrumentality of the sympathetic nervous system certain effects of a reflex character may be produced by the action of heat or cold applied to the body-surface or even only a part of it. Thus, for instance, a sudden application of cold will cause deep breathing by reflex stimulation of the respiratory centers. These reflex effects are numerous and variable and are of much importance in the practice of hydrotherapeutic methods.

#### SOME REMARKS BY "THE FACULTY"

We have been pleased with the large number who have signified their interest in the postgraduate course by enrolling as students; but while many have come in already, there should be a great many more. We therefore take this opportunity to extend an urgent invitation to everybody to enroll. Don't delay. Come in now. Get busy!

Not so many have sent in their answers to the examination questions as should. Possibly the time has been too short. However, while we want as many answers as we can get before the appearance of the succeeding lesson, let it be understood that it is permissible for every student to

take as much time as he needs to answer the questions and send them in. Only do it. We therefore hope that before this number reaches you we shall get replies for the questions from every man enrolled—and from the many more who will be enrolled before this reaches you.

There have been some questions and some objections which we shall try to answer from month to month in these columns, commencing with the following:

#### Number of Examination Questions.—

Several object to the number of questions, thinking there are too many. We do not know but they are right. Therefore, in this lesson we have reduced the total number of questions and we trust that as it now stands this examination will be a burden to no one. We want you to do the work, that is all.

**Research Questions.**—Some find these too difficult, mainly for lack of books to consult. Let it be first understood that the answering or failing to answer these questions does not affect the student's standing at all. The marks are made upon the examination questions proper, not upon the research questions. However, we hope that as many as possible will endeavor to answer the latter, because the answers, when published in the Journal, will supplement the defects in your library and, we hope, set you thinking. Some of them are a little technical in character, but out of them all one should glean a great deal which is of practical assistance. If there arises a question for which you have no means of securing the answer skip it and try to go on with the next.

#### EXAMINATION DIFFICULTIES

Comparatively few found real difficulties with the examination questions, and these only here and there—"in spots." Here are some of the questions as they were answered—good, too!

**Name the Advantages and Disadvantages of the Metric System.**—Dr. H. K. Shoemaker, Flat Rock, Ohio, thus itemizes the advantages: "(1) A common unit; (2) simplicity; (3) decimal system;

(4) exactness." Dr. T. H. Line, Marquette, Nebraska, adds to this that "There is but one group of weights, which have a definite relationship to each other," and as its disadvantages he states that, "Being decimal it cannot be divided on the binomial plan (i. e., into halves, quarters, etc.) as other systems," and he also objects to its orthography and that it is not in common use in this country, thus leading to errors because of ignorance. This covers the case very well.

**Prescriptions.**—These were generally well and correctly written, the quantities being given with reasonable accuracy. A few stumbled on the metric quantities with which it is plain that very few are familiar. In this connection we give at the close of this lesson a criticism of one of these prescriptions, containing quinine and potassium iodide, by Dr. L. B. Evans of Baltimore. Let us have more such criticism.

**The Laxative Pill.**—Good formulæ were generally given, a wonderful variety, but very few gave any reasons for the proportions of the various ingredients which they used. One man gave as the best reasons for his proportions "that the combination worked." Good! But why? Is it all guesswork? We ought to know the *why* of these things. Who will undertake to work out this problem in a short article for this department.

**Proportions in Prescriptions.**—Those answering question No. 11 usually wrote good prescriptions but failed to observe the rule to which this question was intended to call attention. Read again the simple rule concerning the way to estimate amounts in prescriptions, as given on page 125. Go right back to it now.

**Amide and Amine-Alkaloids.**—Generally answered correctly, though some got mixed. Let us repeat.

Amides *contain oxygen* as well as carbon, hydrogen and nitrogen. They are *solid* and *odorless*. Examples of the amides are aconitine, strychnine, and morphine.

Amines *contain no oxygen*, and consist of carbon, hydrogen and nitrogen. They are *fluid and volatile* and have an *ammonia-like*

*smell*. Examples are sparteine, cicutine and nicotine.

**Incompatibility.**—Very little difficulty was shown, but most of those who responded did not go outside of the lesson for examples. Some have asked for a more complete table or list for reference, so we reprint the following:

#### CHEMICAL INCOMPATIBLES

**Alkalis:** Acids, alkaloids, ammonium salts, metallic salts.

**Alkaloids:** Tannin, iodides, bromides (generally) alkalis, mercuric chloride, gold chloride.

**Acacia:** Ferric chloride, lead acetate, alcohol.

**Arsenous Acid:** Tannin, ferric salts, magnesia.

**Antipyrin:** Ferric salts, nitrous ether, tannin, iodine.

**Calomel:** Alkalis, iodides, lime.

**Chlorates:** Mineral acids, calomel, tannin. In dry powder all organic substances and also sulphur and charcoal.

**Chlorides:** Salts of silver and lead.

**Choral:** Alkalis, calomel, strong alcohol.

**Corrosive Sublimate:** Alkalis, lime, iodides, bromides, alkaloids, albumen, gelatin, tannin.

**Iodides:** Mineral acids, alkaloids (generally), metallic salts. The bromides behave similarly.

**Iodine:** Alkaloids, metallic salts, volatile oils.

**Iron Salts:** Alkalis, tannin, iodides, bromides, acacia.

**Pepsin:** Alkalis, tannin, alcohol.

**Permanganates:** All organic compounds, such as sugar, glycerin, gum, plant extracts.

**Strychnine and Morphine:** In solution with bromides deposits a strychnine bromide. *Note:* Powerful alkaloids *never* should be dispensed in solution with bromides or iodides.

**Silver Nitrate:** Chlorides, bromides, iodides, cyanides, alkalis, organic bodies.

**Salicylic Acid and Salicylates:** Iron compounds, iodides, alkaloids, acids liberate the acrid salicylic acid from salicylates.

**Tannin:** Alkaloids, alkalis, metallic salts, gelatin, albumen.

**Advantages of the Alkaloids.**—One of the best statements was as follows: "(1) Scientific; (2) portable; (3) efficient; (4) exact; (5) easy to administer; (6) promptly absorbed; (7) in search for cause of failure 'inert drug' is not to be considered; (8) unimpaired by age." This covers the ground pretty well.

**Advantages and Disadvantages of Standardization.**—Dr. R. S. Lynn, Kiefer, Oklahoma, enumerates them as follows: "Advantages: Exactness in the amount of the active principle wanted and a more scientific dosage. There would be no disadvantages over the old style of liquid



preparations, but many to the use of alkaloids, which are bulkiness, precipitations, evaporations, complexity of names of other active principles with their numerous actions and variations of different manufactures."

#### RESEARCH QUESTIONS

**Glucosides and Resins.**—A good description of the glucosides is given by Dr. T. H. Line, Marquette, Nebraska: "The term glucoside is applied to those organic principles which are readily resolvable into glucose and another organic principle, either by the action of mineral acids, of alkalis or of ferments. They are nearly all ternary compounds, that is, composed of hydrogen and oxygen, while one is quaternary, or nitrogenized, viz., amygdalin, and two are sulphureted, or complex, viz., sinalbin and sinigrin. They possess either neutral or acid properties and occasionally form salts or crystalline compounds; some few are soluble in water, but the greater number are insoluble in water, therefore making them mostly pharmaceutically incompatible in watery solutions. They are readily soluble in alcohol. The organic acid formed in many of them makes them chemically incompatible with alkalis or alkaline substances."

Here is what Dr. E. S. Jones of Marseilles, Ohio, says of resins: "Resins are not definite in composition. They are obtained by precipitating the resinous principles of plants from their alcoholic solutions by the agency of water. They are soluble in alkalis and volatile oils." From this we can deduce that the resins are incompatible with aqueous mixtures, and that they may be prescribed in the form of alkaline solutions or emulsions. Of course the best way to prescribe glucosides and resins is in granule form.

**Galen.**—A good brief description is that of Dr. H. G. Palmer, of Detroit, Michigan: "Claudius Galen, a Greek physician, born A. D., 131, began studying at 17 years of age, gathering all the medical knowledge of his time and putting it in such a foundation of truth that it was an authority for cen-

turies. He excelled particularly in anatomy. He died A. D. 201." It is interesting to know that this eminent Greek physician, who studied his profession in Pergamos, Smyrna, Corinth and Alexandria, went to Rome in his thirty-fourth year and became the physician of Marcus Aurelius, the emperor and philosopher. As Dr. Palmer says, for centuries he was the universally accepted "authority" in medicine. He was energetically polypharmacial; naturally the complex official remedies to this day are called "galenical."

**The First Pharmacopeia.**—Dr. E. S. Jones of Marseilles, Ohio, says that "the first pharmacopeia published under authority was that of Nuremberg in 1542. The first British Pharmacopeia appeared in 1618. The first U. S. Pharmacopeia appeared in 1820. It is revised every ten years." The revising body is elected by a Pharmacopeial convention, consisting of delegates sent from various medical and pharmaceutical colleges and societies, and by the Army, Navy and Public Health and Marine Hospital Services of the Government.

**National Formulary Preparations.**—The following are some of the National Formulary preparations, with the things which different students think they are imitations of:

NATIONAL FORMULARY	PROPRIETARY PREPARATIONS
Mistura Carminativa	Dalby's Carminative
Syrupus Hypophosphitum Compositum	Fellow's Syrup of Hypophosphites
Vinum Carnis et Ferri	Liebig's Beef, Iron and Wine
Elixir Viburn. Opul. Comp.	Hayden's Viburnum Comp.
Liquor Antisepticus	Listerine
Liquor Auri et Arsenii Bromidii	Arsenauro
Liquor Acidi Phosphorici Comp.	Horsford's Acid Phosphate
Syrupus Sennæ Aromaticus	Castoria
Syrupus Pectoralis	Jackson's Cough Syrup
Tinctura Antiperiodica	Warburg's Tincture
Liquor Iodi Causticus	Churchill's Iodine Caustic
Elixir Pepsini	Lactopeptine
Elixir Bromidii Comp.	Bromidia

This list might be continued almost indefinitely. The old "patents" and the most popular of the modern proprietaries nearly all have their imitations in the National Formulary, which are now accepted and urged upon the medical profession as "semiofficial."

**Alkaloids Soluble in Water.**—Of the solid, or amide, alkaloids, which are sufficiently soluble in water for practical thera-

peutic use we know of only two, codeine which is soluble in 120 parts of water, and caffeine which is soluble in about 80 parts of water. Nearly all the alkaloids are given in the form of their salts, as sulphates, hydrochlorides, hydrobromides; their solutions are usually very readily soluble in water and slightly soluble in alcohol. The amine alkaloids, however, which are liquids, are many of them water-soluble. The best-known of these, perhaps, from a therapeutic standpoint, are cicutine and sparteine. Sparteine is very readily soluble in water but the cicutine does not seem to be. However, these are rarely given in solution. The pill or granule form is to be preferred.

#### Who Discovered the Alkaloids?—

This is a question that caused a good deal of difficulty, probably because most of the textbooks do not supply the information. And yet it is something which we should all know. Certainly we should honor the great men who are doing the original work of the world.

Friedrich Wilhelm Adam Sertuerner, apothecary at Einbeck and Hameln, discovered morphine in 1805 and published his discovery in 1817, in Gilbert's *Annalen der Physik*. In 1818 Pelletier and Caventon discovered strychnine and in 1820 quinine; while in 1833 Geiger and Hesse discovered atropine. Many have been demonstrated since those days, and even now more are constantly being demonstrated in different plants.

**What are Esters?**—A good definition is given by Dr. Ralph Browning of Myersville, Maryland: "Esters are analogous to the salts of the metals. If  $\text{CH}_3\text{COOH}$  (acetic acid) be acted upon so that the H is replaced by the radical,  $\text{C}_2\text{H}_5$ , the resulting combination will be  $\text{CH}_3\text{COOC}_2\text{H}_5$ —'ethyl acetic ester.' These were formerly called ethereal salts."

**Sajous's Theory.**—Nearly everybody fell down on this, showing that the conception that most physicians have of this theory is of the faintest. Next month there will be an article on this subject that will give a well-digested outline. Read it carefully. This theory will have to be given consid-

eration in the next few years, and as giving a basis for a therapy it promises much.

**Sizes of Spoons.**—Great variance was found in the sizes of spoons. One physician found that his teaspoons varied from 5 Cc (15 minims) to 8 Cc (2 drams) in capacity; his dessertspoons 12 and 13 Cc (3 to 3 1/4 drams); his tablespoons average 17 Cc. Another found his teaspoons averaged 75 minims, his tablespoons four drams and 40 minims. Another's teaspoons ran 45, 47, 50, 52, 58, 59, 60, minims; his dessertspoons 60, 65, 75, 72 and 80 minims; tablespoons 120, 125, 135 minims. These are fairly representative of the whole number, showing the wide difference in capacity of these ordinary domestic measures and the inexactness of therapeutic means which must follow their use.

**Graduates.**—All pronounce the cylindrical graduate the most accurate.

**Drops from Different Vials.**—The following is given by one of the students; the amounts given are the quantities represented by 100 drops.

"Thick lip, cork stopper.—Tinct. phyto-lacca, 4.5 Cc, fl. ext. cascara, 5 Cc; glycerin, 5.5 Cc; ether, 3.5 Cc; chloranodyne, 4.5 Cc. Pocket vial case.—Tinct. phytolacca, 4.5 Cc; fl. ext. cascara, 4.5 Cc; glycerin, 5.5 Cc; ether, 3 Cc; chloranodyne, 4 Cc. Medicine dropper.—Tinct. phytolacca, 2 Cc; fl. ext. cascara, 2 Cc; glycerin, 3 Cc; ether, 2 Cc; chloranodyne, 2 Cc."

This shows that the use of a medicine dropper is the only really accurate method of dropping medicine.

**Different Electrical Currents.**—This is nicely shown in the diagram given by Dr. Ralph Browning whose paper is one of the few to get the 100-percent grade. We cannot reproduce the drawing here but will give his ideas the best we can, as below:

Static—Electrotonic.

Galvanic—Electrotonic, electrolytic, kataphoretic.

Faradic—Electrotonic.

The doctor thinks the faradic current is also kataphoretic, but most authorities do not agree with him.

### A COMMENT ON A PRESCRIPTION INCOMPATIBILITY

In the Post-Graduate Course, page 134, of the January number of *CLINICAL MEDICINE* the following prescription is given, with the request to write the objections to it:

Quininæ sulphatis.....grs. 30  
Potassii iodidi.....drs. 2  
Syrupi sarsaparillæ.....ozs. 8

The writer is evidently under the impression that this is a chemical incompatibility. But there is no precipitate formed when the two salts are mixed together in solution, and the solution remains clear if you add Fowler's solution; but a milky white precipitate is thrown down when Donovan's solution is added. There is no precipitate with ammonium iodide.

There are numerous examples in the literature of potassium iodide being combined with galenicals containing alkaloids without any precipitate being formed. Elkourie (*J. A. M. A.*, July 30, 1904, p. 350) recommends the following for chronic rheumatism.

Potassii iodidi.....dr. 1  
Sodii salicylatis.....drs. 2  
Colchicinæ.....gr. 1-2  
Strychninæ sulphatis....gr. 1-2

M. ft. capsulæ No. 30. Sig.: One three times a day after meals. Caillé recommends the following expectorant mixture:

Potassii iodidi.....drs. 2  
Tincturæ opii camph....drs. 2  
Liq. ammonii anisati....dr. 1-2  
Syrupi tolutani.....drs. 2 -  
Aquæ .....ozs. 4

M. Sig.: One-half teaspoonful to a tablespoonful three or four times a day.

M. Sig.: A teaspoonful with sugar every two hours. Potter recommends the following for aneurism:

Potassii iodidi.....dr. 1  
Tincturæ veratri viridis...dr. 1-2  
Tinct. cinchonæ comp. ..oz. 1

Ballenger (*J. A. M. A.*, Apr. 13, 1907, p. 1295) recommends the following mixture for local use:

Iodoformi .....gr. 1  
Potassii iodidi .....grs. 10 to 20  
Morphinæ sulphatis.....gr. 1  
Glycerini .....oz. 1

M. Sig.: Apply to the pharynx with a swab once daily.

[Dr. Evans gave other formulas which are omitted for lack of space.—ED.]

It seems to me that *The Journal of the American Medical Association* (July 13, 1907, p. 184) is in error about the precipitate spoken of in the following quotation, as being the periodide of quinine, which, as a matter of fact, is a yellowish, and not a "nearly black" precipitate, as there stated:

"When perchloride of iron is combined with potassium iodide such a mixture develops free iodine, the iron being reduced to the ferrous state. The amount of iodine that may be liberated is liable to be dangerous. *The Pharmaceutical Journal* calls attention to the following prescription in which this reaction is complicated by a secondary one:

Ferri et quininæ citratis....drs. 2  
Potassii iodidi.....drs. 3  
Syrupi .....drs. 4  
Aquæ, q. s. ad.....ozs. 4

"The amount of acid in the solution of the double citrate is small and iodine is slowly liberated. Iodine in potassium iodide solution is a general precipitant of alkaloids and a nearly black precipitate of periodide of quinine will be produced. Addition of enough alkali to neutralize the solution of the scale-salt before adding to the iodide will delay the reaction considerably."

The "nearly" black precipitate which occurs here is evidently that of the protiodide of iron, which is grayish black in color, and is not the periodide of quinine at all. In conclusion, I have to say that I have failed to recognize any incompatibility between potassium iodide and the alkaloidal sulphates of quinine, morphine, strychnine, and atropine. In view of the data supplied by the galenical formulas which I have quoted I believe the asserted incompatibilities between potassium iodide and the alkaloids to be a myth which can be safely and advantageously ignored. L. B. EVANS.

Baltimore, Md.

[This is an intelligent and welcome criticism. However, Caspari (who is a high

authority), in his "Treatise on Pharmacy," says:

"The salts of the alkaloids are decomposed by certain salts of the alkalis, with the production of insoluble or sparingly soluble compounds, therefore such combinations require the special attention of pharmacists in order to guard against accidents. *As a rule*, the alkali carbonates, iodides and bromides are incompatible with alkaloidal salts, while the sulphates, nitrates and chlorides appear to cause no trouble; hence in the case of the first-named salts the directions to shake the mixture should always be put on the bottle. The presence of a certain amount of alcohol in the liquid will prevent the precipitation of the newly formed alkaloidal salt, as may be demonstrated in the following prescription:

Strychninæ sulphatis.....gr. 1

Potassii bromidi.....oz. 1

Aquæ destillatæ, q. s., ad...ozs. 4

"If the solution be prepared as written, strychnine bromide will gradually be deposited in colorless crystals, and may cause serious results should the same be retained in the bottle and a large quantity be taken with the last dose or two. If, however, equal volumes of aromatic elixir and water be used in place of water alone, no separation of strychnine bromide will occur. At least 12 percent of alcohol must be present in the solution to prevent precipitation.

"In a few rare cases, when a sufficient quantity of solvent is present to take up the alkaloid in its pure state, it may be preferable to use the latter in place of its salt, as, for instance, in the following prescription:

Codeinæ sulphatis.....grs. 8

Potassii bromidi.....oz. 1

Aquæ destillatæ, q. s. ut ft...ozs. 4

"It was found that if the codeine sulphate was used, as prescribed, a precipitate invariably formed, which was with difficulty uniformly suspended by agitation, but by using the pure alkaloid codeine in place of the salt a permanently clear solution was obtained. Morphine sulphate is sometimes prescribed in conjunction with sodium bicarbonate, the result being a minutely

crystalline precipitate. Quinine sulphate and potassium acetate should not be associated in solution, on account of the slight solubility of the quinine acetate, which is formed as a very bulky precipitate, and may cause solidification of the mixture."

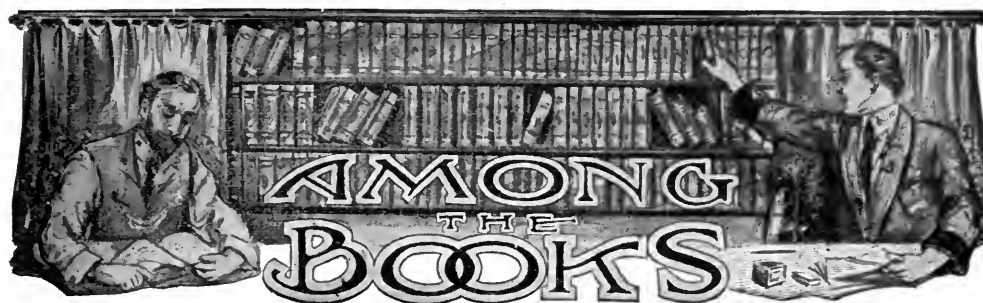
We think that we have given "authority" enough to show the danger of using this combination. That the alkaloid is not *always* precipitated does not militate against the general warning. The very difficulty of *being certain* that your prescription is a safe one is an argument in favor of using the powerful alkaloids in granule form.—ED.

### EXAMINATION QUESTIONS

1. What are counterirritants and how do they affect (a) the circulation and (b) the nervous system?
2. What are the indications for caustics, vesicants, pustulants? What are the contraindications for the same?
3. What is the difference between an emollient and a demulcent?
4. Describe what you think the best method for preparing and applying a linseed-meal poultice.
5. What is the difference between an ointment and a paste? What is the best vehicle when an ointment is to be applied to the scalp? When it is to be used as a protective? When it is to carry medicaments for absorption?
6. What kind of vehicle could be used to get a prolonged protective or medicinal action upon the skin?
7. What three fundamental conceptions underlie therapeutics?
8. What is meant by stimulation and sedation? What vital processes are affected and how?
9. Enumerate the ways by which germ action may be combated by remedial means.
10. State the theory of selective cell-action.
11. How may intestinal toxemia cause, intensify and prolong disease?
12. State the advantages of the small repeated dose.
13. What is hydrotherapy? Is it a physiological or a physical method?
14. What are primary anemia and secondary anemia? Primary hyperemia and secondary hyperemia? Reaction?
15. Describe the physiological action of cold.

### RESEARCH QUESTIONS

1. Describe in detail the form of counterirritation that you find most generally effective.
2. What local application in your experience is best for relieving the pain of neuralgia, rheumatism, pleurisy.
3. Give accurate formulas for Lassar's paste. Unna's paste. Lead plaster.
4. What is Mays' theory concerning the action of antiseptics and antipyretics? (See CLINICAL MEDICINE, Jan. 1908, page 42.)
5. What is meant by the *vis medicatrix naturæ*? Write a historical sketch.



### WOOD AND WOODRUFFS'S "COMMONER DISEASES OF THE EYE"

The Commoner Diseases of the Eye; How to Detect and How to Treat Them; For students of Medicine. With 280 illustrations (many original) and eight colored plates. By Casey A. Wood, M. D., C. M., D. C. L., of Northwestern University, and Thomas A. Woodruff, M. D., C. M., L. R., C. P. (London) of St. Luke's Hospital, Chicago. Third edition enlarged and improved, with index. Chicago, W. T. Keener & Co. 1907. \$2.50.

This always excellent book has changed publishers, with the present improved and enlarged edition. We repeat here what we said of the book in 1904, page 536. It is "the most practical book on the eye for the general practitioner." It is useful as a reference book and it is a book which should be read carefully, in its entirety, and its contents digested by every general practitioner. It deals with subjects with which all should be familiar. Among its many good features is its excellent cross-reference index; the reviewer's conscience is free to say, the very best for this excellent book.

### OTT'S "TEXTBOOK OF PHYSIOLOGY"

Textbook of Physiology. By Isaac Ott, A. M., M. D., of the Medico-Chirurgical College of Philadelphia. Second edition. Illustrated with 393 half-tone engravings, many in colors. Royal octavo; 815 pages. \$3.50 net. F. A. Davis Co., Philadelphia.

This second edition is enlarged by the addition of 240 pages, which allowed the author to bring up his description of the

science to the present stage, which it has acquired since the first edition. It still preserves the pleasing style of a gladly heard lecture.

### GLEASON'S "DISEASES OF THE EAR, NOSE AND THROAT"

A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M. D., LL. D. Illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Price, \$2.50.

In my youth of long ago I studied the subjects of this book under the special instructions of the ever-to-be-remembered Dr. Cornelius Agnew of America, and under Storck and Politzer in Vienna, Austria. In those days I thought we were advanced in instruments and operations. In this country, also, I practised not a little these subjects and read their latest literature. Therefore I think I can judge how far we have advanced in this country and can judge of the value of a book on these subjects when examining it. Hence the pleasure it gives me of saying that I esteem Dr. Gleason's book as the most recommendable to student and general practitioner.

### BISHOP'S "HEART DISEASES AND BLOOD PRESSURE"

Heart Diseases and Blood Pressure. A practical consideration of theory and treatment. By L. F. Bishop, A. M., M. D. Second edition. New York. 1907. E. B. Treat & Co. Price, \$1.00.

In our review of the first edition we compared its greater usefulness for the general practitioner with the more extensive and

theoretical work of Dr. Theodore C. Jane-way on "The Clinical Study of Blood Pressure," published by D. Appleton & Co., in 1906, and we hailed Dr. Bishop's smaller book as very useful for immediate consultation. It is gratifying to the reviewer to see his appreciation shared by others in the profession, so that a second somewhat enlarged edition is called for. We venture to predict that this edition will not be the last.

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#### BARTLEY'S "PHYSIOLOGIC AND CLINICAL CHEMISTRY"

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A Manual of Physiologic and Clinical Chemistry. Third edition, revised and enlarged. By Elias H. Bartley, B. S., M. D., Ph. G., of the Long Island College Hospital. Fully illustrated. Philadelphia: P. Blakiston's Son & Co. 1907. Price, \$1.00.

It is the aim of the author to teach how to find out what there is to be known of the urine, the gastric contents, the blood, the feces, and the milk in health, and the significance of their alteration in sickness, as regards pathology and treatment.

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#### MERCK'S INDEX (1907)

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This is the third English edition of this valuable book, which is a veritable encyclopedia for the chemist, pharmacist and physician, stating names and synonyms, source or origin, chemical nature and formulas, physical form, appearance and properties, melting and boiling points, solubilities, specific gravities and methods of testing, physiologic effects, therapy, administration, doses, incompatibilities, antidotes, special cautions, hints on keeping and handling, etc., of the chemicals and drugs used in chemistry, medicine and the arts. Publishers, Merck & Company, New York, 15 University Place.

The house of Merck & Company dates from a period when science was pursued for its own sake, not for that of the almighty dollar, when the craving mind asked, "Who will show us any good?" and not "What is it good for?" And so Merck acquired

the habit of thoroughness, and with this confidence and reliability came of themselves, from all the world to Merck. Those who have imitated and are imitating this example in our own day will have harder work, but they, too, if they persevere in this noble end, will reap their reward if they faint not and fail not.

Merck's Index, second edition in the German language, was issued at the end of July, 1902, and has been with us ever since for correcting his English Index, second edition, of 1896. The present English work is of course preferable to the last German one, which is five years older, but there are features in the German second Index to which we shall always remain attached. There is no price given for the work, perhaps because it is priceless.

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#### ALBRIGHT'S "BUSINESS METHODS OF SPECIALISTS"

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Business Methods of Specialists, or How the Advertising Doctor Succeeds. An exposition of the inside working of the complicated structure the advertising specialist has built about himself, the doors of which are seldom peon to the professional investigator. By Jacob Dissinger Albright, M. D. Published by the author, 3228 N. Broad St., Philadelphia, 1907. Price \$1.25.

The reader will get here for the price a book of 110 pages of about seven by five inches, but let him take our word for it that all of it is racy, readable and rewarding reading matter, such as only Albright can write. It is well worth the price charged for it.

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#### GOLDSBURY'S "REGISTER OF FOODS"

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This is a graphic study of eatables by the comparison of the percentages, full value per pound given in figures from the latest (1907) official sources of their principal chemical elements. It is designed for students of dietetics. Copyright by P. W. Goldsbury, M. D., Boston, Mass. Whitcomb and Barrows, publishers. Boston. Price not given.

We have nothing to add to the full title, except that it gives quantities in our familiar pounds instead of grams. It is bound in a very good card-board of 19 by 13 inches printed in four different colors. It is the most convenient table we have had the pleasure of seeing and using.

#### BLAKISTON'S "VISITING LIST"

The Physician's Visiting List for 1908, for 25 patients. Fifty-seventh year of its publication. Dose-table revised by the U. S. Pharmacopeia of 1905. Table of uterogestation time. Calendars for 1908 and 1909. Notes on chemical, pharmaceutical and therapeutic incompatibilities. Immediate treatment of poisoning. Tables of weights and measures, metric and apothecary and convertibles. Published by P. Blakiston's Son & Co. Philadelphia. \$1.00. The shape, flexible binding, tuck and pencil have ever recommended themselves to the busy physician.

#### PIERSOL'S "HUMAN ANATOMY"

Including Structure and Development and Practical Considerations. Edited by Dr. A. Piersol of the University of Pennsylvania, with the aid of other active physicians and teachers of anatomy. Published by J. B. Lippincott Company, Philadelphia and London. 1907. Price \$7.00.

There are two ways of studying anatomy, one is for its own sake, as a science to be delighted in and edified thereby, and another is for its indispensable and constant application to the practice of medicine and surgery.

We are glad to notice, and in the name of the seniors though not the seniles of the profession, to express our thanks to the editor for not carrying the zeal of the Basel nomenclatural reform to the extent of killing the old and more familiar nomenclature by a suppressing deadly utter silence. This feature, too, of the book is in accord with its constant endeavor to be of practical use to the physician. We do not mean to be invidious in saying that for a book on the

physician's study table, to be often referred to in the study of cases under treatment, there will rarely be found another work to either surpass or equal it.

#### BRICKNER AND MOSCHOWITZ'S "SURGICAL SUGGESTIONS"

Five Hundred Surgical Suggestions. Practical Brevities in Diagnosis and Treatment. By Walter M. Brickner, B. S., M. D., and Eli Moschowitz, A. B., M. D. Second series. Surgery Publishing Company, New York. 1907.

This is an amplification of the little book with a similar title, published in 1906. The first issue of "Surgical Suggestions," so we are informed, was exhausted in a few months—hence this second series, which contains all that was in the first edition and much more. Those who have from time to time read the practical "suggestions" that have appeared in *The American Journal of Surgery* will welcome another edition of this beautiful little book, which is well filled with the most concentrated and most helpful surgical items, just such as the average man will be likely to find most helpful. The price is a dollar, and while the book is small, it is worth the price.

#### DELAFIELD AND PRUDDEN'S "PATHOLOGY"

A Textbook of Pathology, with an Introductory Section on Postmortem Examinations and the Methods of Preserving and Examining Diseased Tissues. By Drs. F. Delafield and T. M. Prudden of the College of Physicians and Surgeons, Columbia University, New York. Eighth edition, with thirteen full-page plates and six hundred and fifty illustrations in the text in black and colors. New York: William Wood & Co. 1907. Price \$6.50.

Disease is not an entity, and neither is health nor ease. And if the discourse of our every-time attained progress in the science or knowledge of health or ease is rightly termed physiology, so is the discourse of our every-time attained progress in the science

or knowledge of unhealth or disease rightly termed pathology, suffering nature. And the every-time living physician must be acquainted with both. Even if the physician is unfortunately an unbeliever in drug therapeutics, he cannot conscientiously attend a patient without a knowledge of physiology and pathology to the degree it may be found present. That in neither of these branches is the ultimate yet reached is no excuse for their neglect, for the educated physician must be acquainted with the points in these branches that are yet *sub judice*, and they are many.

The book before us is in all these respects most excellent. Pathology and physiology are always brought in view of each other, and the points that are *sub judice* yet are stated as such. Altogether, we shall be found to be correct in giving the book the highest mete of praise, for a pathology fully up to date in the scientific attainment of the discipline.

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#### CARVAJAL'S "TOBACCO AND TOBACCO HABIT"

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Tabaco, Tabacomania, Tabaquism. . . . Revista compendiada. Mexico, D. F. Dr. E. Lavalle Carvajal. De venta en casa del autor, Rosales 14. \$2.00 el ejemplar.

This is a very valuable treatise on tobacco, tobacomania, and tobaccoism. The book is not the product of an antitobacco extremist, asserting everything he has to say under the ridiculous grand eloquence of an "I tell you," but the honest scientific result of a world-wide research in the investigations of renowned scientific men.

It is written in an easily elegant Spanish and treats on the following subjects: Botany, history, composition; pure tobacco and Mexican cigarettes; injurious effects of components, utility and uselessness, use and abuse; acute and chronic intoxication; local irritation, smoker's cancer, buccal leucoplakia; tobacco, syphilis and cancer; the digestive, respiratory and circulatory apparatus; tobacco heart, palpitation, angina pectoris; the nervous system, tobacco neurasthenia;

ophthalmic tobaccoism; genital functions; the organs of sensation; tobacco industry; prognosis, treatment, prophylaxis; conclusions.

The intelligent medical defender or prohibitor of the moderate use of tobacco will find in this book valuable material for support or correction. There ought to be a call for an English translation.

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#### CARUS'S "CHINESE LIFE" AND "CHINESE THOUGHT"

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Chinese Life and Customs. By Paul Carus, Chicago. The Open Court Publishing Company. 1907. Price \$0.75

Chinese Thought. An exposition of the main characteristic features of the Chinese world-conception. By Paul Carus, Chicago. The Open Court Publishing Co. 1907. Price \$1.00.

These two books are profusely illustrated and give an amount of information, both textual and pictorial, of unusual reliability. They are written by an author whose wonderful familiarity with this subject and whose scientific and ethical culture insure such an honesty of presentation that it is a delight to recommend them to the general reader.

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#### HENRY PHIPP'S INSTITUTE

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Third Annual Report of this, one of the noblest scientific benevolent, institutions for the study, treatment and prevention of tuberculosis. February, 1904.

You can get it by writing to Dr. Joseph Walsh, 238 Pine St., Philadelphia, and your library will then have the best book on the great medical question of the age.

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#### MICHIGAN STATE BOARD OF HEALTH

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Thirty-fourth Annual Report of the Secretary of the State Board of Health of the State of Michigan, for the fiscal year ending June 30, 1906.

We thankfully acknowledge the receipt of the above, December, 1907.





#### PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## ANSWERS TO QUERIES

ANSWER TO QUERY 5255.—“Atropine and Dilated Pupils,” by F. M. L., Arkansas. I wish to say that all medicines, if they have any action, have a specific action on diseased conditions. And the all-important thing is for the doctor to study the action of his remedies according to the conditions that obtain and forget the conditions of the disease.

Now, belladonna (or its active principle atropine): The specific indications for belladonna are dull face, dilated pupils, dulness of mind, tendency to sleep, impaired capillary circulation, cold extremities in congestion of the brain and spinal cord, met with in scarlet-fever and in whooping-cough and in some throat troubles. In these conditions belladonna is a specific and is curative, no matter what the name of the disease your patient is suffering from.

Take the opposite condition: Flushed face, bright eyes and contracted pupils, increased heat of head and general headache, hot extremities and surface of the body. Determination of blood to the brain: the opposite condition from what the doctor describes. In this condition gelsemium is a specific, will give immediate relief and is curative, and will surprise the doctor as did the atropine.

If the doctor wishes to know more of the action of remedies along this line, and will send and get Scudder’s “Specific Medication”, he will be surprised and delighted, and in the use of the alkaloidal remedies will be surprised at his success and the small amount of the medicine required.

“Specific Medication” can be had by sending to John K. Scudder, 1009 Plum St., Cincinnati, Ohio. Price \$2.00.

GEO. D. COE.

San Francisco, Calif.

ANSWER TO QUERY 5325.—You can cure rhus toxicodendron poisoning, relieve the excessive itching and burning, by using Lloyd’s specific tincture of echinacea angustifolia and hot sterilized water, equal parts; to cure a bad case, say 8 ounces each. Cleanse the surface well first with carbenzol soap and soft hot water, mop with a soft cloth after bathing well with this soap and water, and while the skin is slightly moist apply this solution (echinacea and water), wrap the parts affected in the best quality of absorbent cotton and keep damp with this solution.

At the same time take enough magnesium sulphate to wash out the entire length of the digestive tract and keep the bowels open and clean, and within forty-eight hours your rhus toxicodendron poisoning will have disappeared and your patient will thank you a thousand times and send you other patients. My Dear Sir, cure all cases of insect-bites, bee-stings, urticaria and similar troubles with the same remedy, applied the same way, and you will be surprised at the pleasing results.

Give echinacea angustifolia internally, from 3 to 30 drops, in all cases of fever anywhere and under all circumstances, with coated tongue (any kind of a coat), with bad odor from the breath, bad taste in the

mouth, in any case in which you find an offensive smell coming from within. Cure your snake-bites with it in 15- to 30-drop doses every half hour, and apply locally a 50-percent solution to bitten surfaces. Apply freely; it will cure. All these cases should be cleaned out and kept clean with saline laxative.

† This inquirer (5325) asks the question, "What is *rhhus toxicodendron* used for?" Now that's funny. Why, I have used this remedy internally for forty years, and it seldom fails when my diagnosis is correct. It is useful in cases of supraorbital pain, when there is strawberry-tongue, burning pain, a stinging sensation, in all fevers and in inflammatory diseases showing the above symptoms. In itching, burning exanthemata and in erysipelas give specific tincture of *rhhus toxicodendron* (five to eight drops in four ounces water), one teaspoonful every one or two hours. *Echinacea* should be

used externally and internally with *rhhus toxicodendron*.

Get a copy of Scudder's "Specific Diagnosis" and "Specific Medication" (two books) and "catch on." Keep up with the advance of medical science. Get into the band wagon! Don't open your eyes and exclaim, "Eclectic!" Get out of the old ruts, lay aside prejudice, and invest \$5.00 in these two books (less 10 percent if bought from John K. Scudder, M. D., of Cincinnati), peruse them with the intention of learning something more than you ever knew before. It will do you good. In the language of the poet,

Seize upon truth wherever found,  
On Heathen or on Christian ground,  
Among our friends, among our foes,  
The fruit divine where'er it grows.

I am not working for Lloyd or Scudder, either.

J. E. CALLAWAY.

Chillicothe, Mo.

## QUERIES

QUERY 5259. — "Effect of Morphine Thrown into Vessel." B. B. W. of Texas writes: "On page 1269 of the October CLINIC Dr. W. F. Nelson reports a case of 'morphine idiosyncrasy,' and I have just been thinking what a nice chance it was for you to explain vasomotor dilation or constriction. Don't you believe he threw the morphine, a constrictor, into a blood-vessel and it was so quickly picked up and carried to the heart or cardiac center that it produced palpitation or constriction of the blood-vessel and consequent palpitation? Now, I have done this same thing, in patients and immediately followed with atropine, and the untoward symptom was relieved in one minute. And another thing, I never have had it happen with morphine when combined with atropine. Now, it can't be an idiosyncrasy, as it has happened with me in patients in whom I have used morphine before and after with no such effect. I think I have had it in four different patients, and always relieved it by a vasodilator at once. There is no question but

that the face and lips are even "stiff" after the one- to five-minutes' excessive hard and fast beating of the heart."

It seemed strange to us at the time that Dr. Nelson failed to grasp the significance of the symptoms which presented after the injection of morphine. There is no question but that he threw the morphine into a vessel. Tingling, burning and rapid heart action invariably follow the injection of a solution of morphine into a blood-vessel of any size, and we have seen a patient suffer severely; every particle of the body from head to feet seemed to be on fire and tingling intensely. Throbbing occurs in the temporal region, the eyes become congested and the heart-rate increases extraordinarily. A splitting headache may last for hours. If morphine is thrown into a nerve-trunk almost instant numbness of the area supplied by the nerve ensues. A man should be quite sure that he does not inject morphine solution into a vessel and an experienced practitioner will rarely do it. No "idiosyncrasy" about it, Doctor. We

felt like calling Dr. Nelson's attention to these facts, but upon second thought remembered they are known to almost every physician. Atropine might relieve symptoms, but its addition to a solution of morphine would not prevent their occurrence if fluid were thrown into a vessel.

QUERY 5260.—“The Right Remedy Improperly Used.” W. P. H., of Georgia, reports his experience with calx iodata in the treatment of a case of membranous croup as follows: “About ten years ago I began to read the fine results with this remedy in the treatment of membranous croup. I secured a supply of the drug and commenced its use at once, and up to the present time I thought we had an infallible remedy for this dreaded disease, but my confidence has been shaken. I was recently called to a little fellow, aged two years, with all the distressing symptoms of membranous croup, every symptom being present. No question of diphtheria in the case.

“I commenced giving three tablets of calx iodata dissolved in a spoonful of hot water every hour until symptoms were relieved. I also gave gr. 1-4 of calomel every half hour until one grain was taken, stating to the family that the child would undoubtedly be better within a few hours. I left promising to call late in the evening of the same day. To my astonishment on making my evening call I found the patient not improved but instead all symptoms worse. I had used this treatment in so many cases in years past with never a failure before. I began to think, surely my medicine had not been given as directed, but on close questioning and more mature thought I decided this could not be true, but, anyway, I decided to remain all night and see that the medicine was given under my own eyes.

“I immediately commenced giving five of the calx iodata tablets every hour and continued this dose for sixteen hours, the patient growing worse all the time until he expired at nine p. m. the following night, never getting any relief except one

time about midnight, when I gave him a hypodermic of apomorphine, which induced vomiting and relaxation and a few moments of easy breathing and quiet sleep. Now, had I known that my remedy was going to fail me I would have resorted to tracheotomy before it was too late, and that is my reason for reporting this case. Do not put too much confidence in any one remedy, for it may succeed in ninety-nine cases and then fail you on the one-hundredth. You may publish this if you think it worth while, otherwise drop it in the waste-basket; but I think we should publish some of our failures as well as our successes.”

You are correct, we learn more from our failures and there is a valuable lesson here. First and foremost, Doctor, let us here impress upon you the fact (with which you are of course familiar) that *no remedy is to be regarded as infallible*, and in every case we must *meet the conditions present*, with the right therapeutic agents. Now, it appears to us that in this instance steam inhalations, cold compresses, the *earlier* use of emetics, cactin (or other heart tonic) and lobelin were indicated. We *may* in ten cases of croup find calx iodata all-sufficient, but, in the eleventh case we must “recognize the peculiar conditions” and give the *right* remedies therefor *to effect*. Moreover, once in awhile tracheotomy or intubation becomes imperatively necessary, and as we have pointed out time and again in our literature, the practitioner must be ready to do either operation at any time. In this case you say you “stayed all night,” giving, quite late, a dose of apomorphine. That dose (with other indicated remedies) given earlier might have obviated intubation or tracheotomy *but*—if the need for either occurred, it should have been done. We are just writing you as we would talk alone together and we know that you know all this as well as we do. Calx iodata is our *best* remedy in membranous croup, but its power has a limit and the doctor using it must still be “the doctor” and use his knowledge of pathology and materia medica when need arises. May we urge you here to obtain Dr. Candler's new book, “The

Every-day Diseases of Children"? It will help you out of many a tight place—and we all get into them now and then.

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 QUERY 5261.—“Mitral Stenosis and Some Remarkable Medication.” M., of Ohio, reports the following instructive case: “A woman, 66 years old, has mitral stenosis with moderate arteriosclerosis. For many months she has had attacks of dyspnea, rapid and tumultuous pulse, upon the least exertion, and has been confined to her bed most of the time. Last week I was called in a hurry to see her, in the absence of her regular physician, and found her with a pulse of the character described, with much muscular twitching of the face and arms. She was unable to speak. The daughter, who was familiar with such attacks, had been following the usual course of medicines ordered by the attending physician, until she became frightened and sent for me. During the two hours before I saw her she had had the following: 20 granules of glonoin, gr. 1-250; 20 granules of digitalin, gr. 1-67; 2 granules of strychnine arsenate (gr. 1-67); three teaspoonfuls of aromatic spirit of ammonia, one teaspoonful of brandy, and four teaspoonfuls of Magendie’s solution of morphine—which the doctor had said was a full dose! I did not feel inclined to give any further medication! I asked the daughter how often and how much digitalin she had been taking, and she said, 20 granules at a time four times a day every other day. I asked whether she were sure the doctor told her to give that many, and she assured me that she had taken 80 granules every other day for three weeks, and that when she did not, her ‘heart went all to pieces.’ What do you think of this treatment? Patient died in convulsions.”

We absolutely dare not express ourselves. It is indeed remarkable that this good woman lived as long as she did and she certainly was entitled to “die in convulsions” or in any other awful complication one could imagine. It seems to us that there was no “further medication” for you to give—though you might have tried an

emetic and washed out the stomach and bowel as in any case of poisoning. Of course the human body can become accustomed to almost anything and even the massive doses of digitalin you name might be exhibited (for a time) without fatal results. We need not point out to you the utter absurdity of giving twenty granules of digitalin four times a day, or dwell upon the still more ridiculous idea of giving digitalin in such massive doses every other day! Six granules four times daily would be heavy enough medication to meet any pathological conditions conceivable and by giving cactin (gr. 1-67) with each dose of digitalin a very much smaller quantity of the latter drug could be used, in fact we might possibly have been inclined to give cactin and caffeine as a “forlorn hope” had we been called to see this unfortunate patient. With this case as a text it is unnecessary to preach a sermon on the danger of overdosage. “The smallest known, to-be-effective dose—at intervals to effect—remedial or physiological” is a safe rule to follow. Where the “desired effect” does not follow the exhibition of a reasonable quantity of an active drug we may rest assured we have selected the wrong remedy and must diagnose more closely and bring to bear our knowledge—which should be thorough—of drug-action.

Digitalis has killed where the cardiac lesion it was given to cure would not have proven fatal, and morphine has perpetuated more painful conditions than it is pleasant to think of. Overdoses of the “right remedy” are often more injurious than small quantities of the wrong drug. It is the *effective* dose of the *right* remedy which counts!

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 QUERY 5262.—“Triple Arsenates” in Bronchial Hemorrhage.” V. A., Texas, asks: “In debility from bronchial hemorrhage would you advise the triple arsenates with nuclein, if so, will you please give the ordinary dose? The triple arsenates with nuclein will probably prove one of the most satisfactory reconstructants and tonics in the case you mention. We should add sanguiferrin, one dram (one tablet) three

times a day either with or just before meals, according to the age and condition of the patient. The adult dose of triple arsenates with nuclein would be one or two tablets after each meal. May we suggest that you add morning, noon and night four to eight drops of nuclein, dropping it under the tongue and instructing the patient to allow it to be absorbed from the buccal mucosa? The local condition of course requires attention.

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QUERY 5263.—“Expectorants: Their Nature and Use.—A Criticized Circular.” C. W. H., North Carolina, asks: “What are the proper use of and indications for expectorants? In treating bronchopneumonia, colds, croup, etc., in children and babies should expectorants such as emetine and apomorphine be pushed when the child is in such a state that it will not respond to emetics? Is there not danger in drowning the patient in his own secretions? If so, how far should expectorants be used and what kind? Would sanguinaria be better than the above-named expectorants?”

“Has the so-called “ethical” drug firm joined the counter-prescribing druggist against the physician? Does not the enclosed circular mailed to people by our local druggist look like it? What steps do you think should the physicians take for self-protection? What steps should physicians take for self-protection against the druggist, lay press and the clergy, the latter boosting every readymade compound? Will not the evil of prescription-writing in the end ruin the doctor? He puts all he knows in writing to be copied broadcast—publication of all he knows for no pay. Does the lawyer ever tell a man all of the points and uses of the law and teach him to use said knowledge for self and friends? When the doctor visits a charity patient (which he should do) he runs the risk of losing a paying call. When a minister gets out of bed on a cold night to visit a destitute sick man—I mean if he should break the record and do such a thing—does he risk loss of any cash business?”

On looking over the pamphlet enclosed it appears to be intended for the perusal of the practitioner only and offers him a “ready-made” cough remedy for dispensing purposes. The formula is a good one and (as pointed out) its *name* does not tell the patient anything and would not cause him to go to the drug man and ask for “two ounces of cocillana for my cough.” If your druggist sent that printed matter to the laity he is at fault—greatly at fault—and should be made to realize that he cannot play fast and loose with the doctor. We cannot but realize, however, the need for well-made “ready-for-use” preparations; every doctor is not trained to write, off-hand, prescriptions suitable for each case, and if he is, he cannot be sure that the druggist will make it up properly, of effective material. By prescribing, say, elixir of buchu compound or syrup of codeine compound, he knows his patient will get an active medicine. Of course we believe that the small dose of an active remedy carefully selected to meet the pathological conditions present, dispensed on the spot, will prove better than anything else, and a very large proportion of the profession agrees with us, as you know. Moreover, converts are being made by hundreds each month.

Now as to the indication for expectorants We have, as you are aware, sedative and stimulant expectorants. The case which would respond perfectly to a sedative expectorant would be injured materially by the use of a stimulant. And of course *vice versa*. The sedative expectorant promotes secretion and renders it less tenacious, hence more easily voided. Such drugs as emetine, apomorphine, aspidospermine and lobelin may be taken as examples. These remedies are particularly indicated in acute bronchitis—early stage—when cough is pronounced but expectoration is scanty. All these drugs produce, in larger dose, *centric vomiting*, and occasionally the act of vomiting is beneficial as, owing, first to relaxation and then expulsive spasm, plugs of mucus are expelled from the bronchi. Stimulant expectorants lessen the amount of secretion

—often also acting as tonics to the mucosa. Many drugs of this character exert also an antiseptic (germicide) action. Sanguinarine, senecioin, scillitoxin, creosote, benzoin, ammonium chloride, eucalyptus and cubebin may be quoted as examples. These remedies are given as a rule in subacute or chronic affections of the respiratory tract and where there is excessive expectoration—or retention of secretions. Adjuvants are often essential; for instance, we may have to give some remedy to lessen the excitability of the respiratory center, such as codeine, morphine, heroin, etc., or something “to take up the slack,” as strychnine, brucine, etc. Antispasmodics are called for in some conditions (atropine, hyoscyamine, lobelin—the latter drug being both expectorant and motor depressant), and circulatory stimulants are often indicated when the pulmonary circulation is sluggish. We shall try to give an article upon this subject, although all the recent works cover the ground. Get “Alkaloidal Therapeutics” and “The Everyday Diseases of Children,” Doctor; they will serve you well.

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 QUERY 5264.—“Infantile Paralysis.” A. H. M., Oklahoma, has a little patient who presents the following clinical picture: Boy, light complexion, 17 months old, weight 21 pounds, height 32 inches, bright disposition, in good health except slight trouble with constipation. Has never been able to sit up alone nor hold up head, which hangs limply, eyes roll sometimes with a somewhat vacant stare. The child takes an interest in everything and is easily moved to laugh and tries to talk, but has not yet learned to speak any words. The child is a first-born from healthy young parents. Child’s body and head are about normal size for height. Lower limbs are slightly emaciated and are not developing with the rest of the body. Child has never been given treatment for the trouble. He has seven teeth. What he would like to know is whether this is a suitable case for the administration of thyroid gland.

This child has a form of infantile paralysis; just where the lesion is situated we cannot

tell without a much clearer idea of the clinical conditions. How about lues? Any injury or abnormality at birth? The fact that the stare is “vacant”, the head rolls and the lower limbs are wasted leads us to fear progressive paralysis. Push avenin, nuclein and calcium lactophosphate and massage the back, neck and limbs thoroughly; better still, use the faradic current. No, Doctor, thyroid gland is not indicated here but neuro-lecithin—with the other agents named—might do much. Test reflexes, etc.; observe and report later.

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 QUERY 5265.—“And the Man Died—So Did the Woman.” J. C. T., Arkansas, tells us that he was called in consultation with two other doctors some time back, and found a man suffering with swamp-fever (malarial hematuria). The attending physician had given him three doses of calomel, estimated at 40 grains per dose. He lived thirteen days. The doctor writes: “I will give you his last words, then you can guess the rest: ‘I am raw from the tip of my tongue to the bottom of my stomach.’ How is this for heroism? The attending physician held out for more calomel, backed up by the other doctor, so you see where I was with a majority against me. Is it a fact that two are better than one? And are such doses ‘rational?’”

Your very interesting communication strangely enough follows another one outlining still more remarkable medication. The gentleman whose letter we have just answered describes the death of a woman whose physician had been giving her twenty granules of digitalin every three hours. In the two hours prior to his visit (he was called during the absence of the regular physician) she had received twenty granules of glonoin, twenty granules of digitalin, two granules of strychnine (gr. 1-67), three teaspoonfuls of aromatic spirit of ammonia, one tablespoonful of brandy and four teaspoonfuls of Magendie’s solution of morphine. The doctor says, “I did not feel inclined to give any further medication,” and concludes, “She died yesterday in convulsions.”

That your man should be "raw from the tip of his tongue to the bottom of his stomach" is no more peculiar than that this unhappy woman should have died in convulsions. You ask whether two are better than one? Yes, Doctor, two "half-posted" alkaloidists are better than one "authority" of this type, but one well-posted positive therapist is worth two hundred practitioners who medicate without the slightest conception of the action of drugs. The man who has been used to inactive medicines might perhaps order alkaloids wholesale once but would never do it again, and it is hard to believe that any practitioner of the present day, having access to medical journals, etc., could push calomel in ten-grain or larger doses in malarial hematuria (the large doses used to be given in the South), but then, it would seem absolutely impossible that any physician could give the medicines exhibited in the other case described. We know that occasionally the "large dose" (especially of digitalin) may be required, but not such doses as are mentioned here! When excessive quantities of a drug are necessary to produce (or maintain) effect we are not using the *right drug*; some other remedy (alone or in combination) will do the work—and in reasonable doses. Cactin and strychnine suggest themselves in the woman's case—or sparteine might have been tried. Forty grains of calomel can do much harm—five grains in divided doses, much good!

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QUERY 5266.—"John Chinaman, and Hyoscine, Morphine and Cactin." A correspondent in Luzon writes at length describing the quandary in which he found himself when a Chinaman on the table awaiting injection with hyoscine, morphine and cactin anesthetic prior to operation for the radical cure of hernia confessed himself to be an inveterate opium smoker and user of morphine. "John Chinaman" injected ten to twelve grains of morphine daily. The doctor had invited several local notables to witness the action of the new anesthetic which was to arrive on the incoming mail and expressed himself as feeling intense

relief when the postmaster, one of the invited guests, arrived with packages from The Abbott Alkaloidal Company, which proved however not to contain H-M-C. The U. S. mails were loaded with balm, for the nonarrival of the anesthetic caused the operation to be deferred, but, the doctor writes: "What on earth could we have done had the tablets been there? What is to be done with the morphine addict—increase the morphine and hyoscine or just the morphine, or fill the patient up with his dope and then treat him as an ordinary individual, or refuse to use hyoscine, morphine and cactin at all? The patient absolutely declines ether and chloroform."

We have answered the doctor as follows and should now be pleased to have expressions of opinion from the field, especially from those who may have given this anesthetic to morphine addicts.

Surely, Doctor, there was no great reason for your "quandary." Hyoscine, morphine and cactin compound should have been given to the Chinaman in the usual manner and would probably have proven perfectly efficacious. You see you give H-M-C in either two or three doses, increasing or lessening the last doses as the condition of the patient warrants. The morphine habitue is not either tolerant of or oversusceptible to hyoscine and the action of hyoscine-morphine-cactin being unique is manifest even in such subjects. We are sorry that you did not get the tablets and use them on "John Chinaman." Bear in mind that in very many cases two injections produce an anesthetic sleep—not quite deep enough to permit section of the skin without complaint from the patient, but here a whiff or two of ether or chloroform proves sufficient and the patient sinks into a profound anesthesia which lasts throughout the operation. Hyoscine, morphine and cactin is proving useful in the opium habit; small doses being given as often as necessary to prevent deprivation symptoms. In the meantime elimination is pushed and tonic alteratives are given. Hot baths, high enemata, etc., are useful. Let us hear the experience of the "family."

QUERY 5267.—Myoclonia?" F. H. D., Missouri, writes: "I need help in the following: Male, aged 82, born in Ireland, came to America when five years old, never had any sickness except measles, making a good recovery. Family history good; has been a man of a rugged physique and is well developed. About five years ago he began having what he called spasms of the left leg up to the hip. These attacks last about three minutes. They come on suddenly without any warning, and while they last he cannot control his limb by supporting it with all the strength he can exert. His mind is not affected in any way. It leaves the limb weak, partial paralysis. As time elapses the limb grows weaker, so that now he can scarcely extend it. The last one he had the spasmodic twitchings of the muscles extended to the left shoulder and arm and he says that since this his leg and left side are much weaker than before. He now has to drag his left foot. Tactile sense is good; he complains of numbness on that side, especially the leg. Appetite is good, and he appears otherwise in good health. What is the trouble and what is the treatment? These attacks appear every two to four weeks and sometimes not oftener than once in three months. They may come on during sleep. Exercise or fatigue does not bring them on."

The great age of the patient renders cure unlikely and without a most careful examination it is impossible to say just what the lesion underlying the condition is. Myoclonia is not infrequent in elderly males, and "senile chorea" is usually an evidence of cortical degeneration. In disseminated sclerosis we should not expect such long intervals between attacks and the general clinical picture varies from that given by you. In myoclonia the lower extremities suffer and the affection may be unilateral. The clonic contractions come on suddenly and may be so severe as to appear tetanic. Occasionally the seizure arouses the patient from sleep, but as a general thing an attack ceases when the patient becomes somnolent. The intellect is unaffected and

the face, body and sphincters are not involved. The prognosis in the old cannot be good. Elimination is desirable and you might with advantage give the nervine formula (Waugh) and small doses of atropine valerianate. Galvanism is suggested and vibration would probably prove useful. Push neuro-lecithin in full doses.

QUERY 5268.—"Calx Iodata in Syphilis." G. H. H., Maryland, is giving calcidin in a case of cerebral syphilis but finds some difficulty in administering it. He gave one No. 00-size capsule four times daily and is increasing the dose gradually by adding first a 2-grain tablet, then two 2-grain tablets, then a 5-grain capsule, but finds it a very cumbersome and awkward way of administering the drug, particularly when the patient is practically without a memory. He asks: "May I push the remedy to a dram three or four times daily and can you suggest an easier way to administer it? I notice you are not enthusiastic about the use of calcidin in syphilis. My patient is very dull mentally. Memory very poor, and he is inclined to sleep a great deal; his general health is fine and he takes outdoor exercise, as chopping wood, etc."

We are "enthusiastic" about calx iodata in syphilis—it is infinitely superior to potassium iodide. We would hardly however suggest such massive doses and have never yet seen a case in which such were indicated. You will probably find iodized calcium, mercury and nuclein combined more effective than calx iodata alone. Such a compound is listed. Five grains of calcidin might finally be added to this tablet, i. e., one 5-grain capsule, and we think this will be all-sufficient. In rare cases it is necessary to run calcidin up to sixty grains per day for a short time, which should be three 5-grain capsules four times daily. Further than this we do not believe it would be wise to go. Elimination must be stimulated in this case to the full extent and we would advise small doses of phosphoric acid with meals. Also iridin, gr. 1-3, three times daily.





**MAGNESIUM SULPHATE IN ENDOMETRITIS, etc...**  
In the *Wisconsin Medical Journal*, C. J. Wallace contributes an interesting article on the treatment of metritis, epididymitis, by the use of magnesium sulphate. His method consisted in pouring an ounce of the crystal magnesium sulphate into the vagina, and confining it there, until by osmosis it has induced a free discharge from the pelvic tissues. This was repeated daily for one week, with the result of reducing a large, spongy, subinvolved uterus to normal dimensions. He also treated with similar success a case of epididymitis, by application of cold saturated aqueous solution of the same salt.

**HEMOSTATICS.**—We have received several reports showing the efficacy of atropine as a hemostatic in hemophilia. This brings up the query as to the value of the H-M-C (Abbott) in such cases. It has been proved that hemorrhage is much lessened by the use of this anesthetic. There may be occasions where operation is imperative upon a hemophiliac; if so, it would be of the greatest interest to know whether the tendency to hemorrhage is lessened or stopped by the use of this anesthetic, rather than by chloroform or ether. While calcium chloride should be administered previously, if necessary, there are occasions when we have not time to wait for its rather slow action.

**FALLACIES ABOUT APPENDICITIS.**—In the *Detroit Medical Journal* Cruickshank, treating of appendicitis, discusses the following which he terms fallacies: The appendix is a developmental vestige; it has no important physiological function; it is useless and dangerous; the human being is much better and safer without it; every diseased appendix and every one that has been diseased should be removed at once; the physician's delay in calling a surgeon has sacrificed many lives; there is no medical treatment for appendicitis. "Even in 1888 typhlitis was so well treated at Guy's hospital, London, that not one death had occurred in five years, except to those who were moribund upon entrance (Fagge's "Practice of Medicine), treatment has improved since."

**GASTRIC DISEASE.**—We have just perused a reprint on the nonoperative treatment of gastric diseases, by Dr. Turck, of Chicago, reprinted from the *New York Medical Journal*. This paper has given us so much pleasure and edification that we desire to call the attention of our readers to it. Probably a copy of it can be obtained by writing

to its author. Do this now, before you forget it; then write and thank us because we called your attention to this paper. Not that we have a word to say against the surgeon or his treatment of gastric disease, only it seems better for you, Doctor, if you can devise means of curing these cases yourself, without sending them to the operating table; and this is exactly the point that Dr. Turck meets in this admirable paper.

**QUININE AND ITS SALTS.**—The proportion of the pure alkaloid in the various salts of quinine is as follows: Sulphate 74.1, bisulphate 58.8, hydrochloride 81.5, dihydrochloride 81.6, hydrobromide 76.4, and salicylate 68.5. The popularity of the sulphate simply rests on its being first employed, the hydrochlorate and hydrobromide being better in all respects; ready solubility and high alkaloidal content. Howard prefers the dihydrochloride, as being soluble in its own weight of water, and possessing a large proportion of quinine, so that even in tablets it would not readily pass through the bowel undissolved. It is very bitter—*Lancet*. Merck quotes these salts at these prices for single ounces: dihydrochloride 51c., salicylate 48c., hydrobromide 47c., hydrochloride 45c., bisulphate 26c., and sulphate 28c.

**TICK FEVER.**—In the *Medical Sentinel*, W. O. Spencer contributes an interesting paper on "Mountain Fever," resulting from the bite of the tick. He reports that every case made a good recovery under the following treatment: Calomel and magnesium sulphate, exhibited rather liberally in the beginning and at intervals throughout the attack as occasion demands; salol, phenacetin and quinine in moderate doses for the headache, bodily pains and fever; bismuth and pepsin to allay gastric irritability; strychnine especially during the latter part of the attack, with iron and quinine in tonic doses throughout convalescence. To promote diuresis and diaphoresis, and reduce the temperature during the febrile stage, water internally and externally was freely used. Diet restricted to milk and broth every four hours, until convalescence was established.

**HOW TO GIVE DIGITALIN.**—Huchard commends three ways of giving digitalin in cardiac affections. The first is to give 1-20 grain in one or two doses for one day. In from thirty-six to forty-eight hours abundant diuresis sets in. If not sufficient this is repeated in eight to ten days. When diuresis ceases very small doses should be prescribed after.

a fortnight and continued for three or four weeks. In the second, sedative or weak doses are given. Palpitation and dyspnea are relieved in mitral diseases, even during perfect compensation. From 1-200 to 1-100 of a grain is given for five consecutive days and repeated every three or four weeks. The third is the cardio-tonic dose, which exercises a cardiac but not a diuretic action, and should be continued for weeks and months with intervals of rest from time to time. From 1-300 to 1-250 of a grain once a day suffices. There is no danger when the drug is used in this way.—*Medical Bulletin.*

**MEDICINAL PLANTS.**—*The American Druggist* speaks warmly in favor of the cultivation of medicinal plants in America, mentioning the experience of Rittetoe in growing belladonna in the Shenandoah Valley. Of the first year's crop the leaves assayed about thirty-two hundredths of one percent of mydriatic alkaloids, each root producing one stem. Sixty percent of the plants withstood the winter, and in the spring three stems appeared on each root. By October the plants grew to a height of sixty-five inches, the leaves by this time assaying sixty-eight hundredths percent of alkaloid, which is considerably better than most belladonna leaves on the market. In the case of belladonna, *The Druggist* says the increasing scarcity and growing deterioration in the quality of the roots and leaves increase the natural interest in the attempt to cultivate this plant in America. Query: Is this growing deterioration taken into consideration by the manufacturers of tinctures and fluid extracts?

**QUALIFICATIONS FOR A NOSTRUM MANUFACTURER.**—J. D. G., California, wants to know what qualification is required for a person to run a laboratory for the manufacture of medicines to sell to wholesale and retail druggists. We might with a modicum of truth and startling brevity answer: A maximum of gall, a minimum of conscience, a comfortable working capital, and a genius for writing deceiving advertisements; and, perhaps, a formula or two would be found useful. However, we shall not cut off our querist quite so short, but will add that while the different states have laws regulating the practice of pharmacy, the nostrum manufacturers have been able to exert enough influence on legislators—through the "red-clause" newspaper or otherwise—to secure for themselves specific immunity from the operations of such statutes. The recently enacted pure-food and drug laws are not altogether so favorable to the nostrum interests, but the manufacturers, by observing a few simple precautions, may not only escape any trouble on account of these laws, but may actually turn them to account as aids in their advertising.—*Druggists' Circular.*

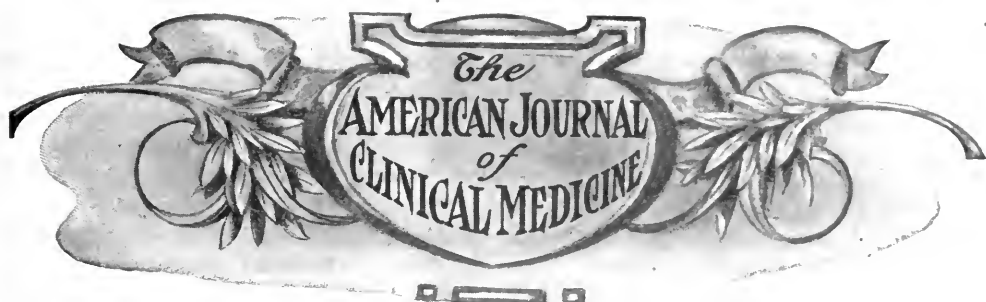
**CHLOROFORM.**—In *The West Virginia Medical Journal* for December, Dr. C. M. Slater contributes an interesting paper on "Chloroform Anesthesia and the Anesthetist." He prefers chloroform and says that the man who makes a specialty of ether should not give chloroform. The practice of surgeons doing minor operations in their offices, calling in neighboring physicians to give an anesthetic to a patient who has had no previous preparation, should

be discouraged. A number of fatalities have occurred from gross neglect in the use of chloroform. Many hospitals, public and private, have at last begun to realize that the experienced anesthetist is necessary.

We would suggest the following as an appropriate question for debate at meetings for medical men: "Resolved, that chloroform and ether should not be administered in any case excepting by skilled anesthetists, in institutions where every safeguard against the serious consequences of these agents could be supplied." We would suggest that the man who takes the affirmative of this question can find in the literature of the last year abundant material for the upholding of his view.

**ANESTHESIA.**—If you are going to use ether alone as an anesthetic, as directed by Dr. Wood, then do it rightly, according to the most approved manner, as described by Lord in *The Medical Herald*. "Great advantages have been experienced by the use of Crile's method of anesthesia, which consists in introducing the ether by means of rubber tubes in the nostrils, extending to the epiglottis. The previously cocainized pharynx being packed with gauze, the ether is administered through a funnel filled with gauze, the funnel joined by a large tube and Y to the smaller tubes in the nostrils. Care should be taken to avoid hypersaturation of the gauze, which would allow liquid ether to find its way into the larynx. By holding the funnel upside down this can be readily avoided. The advantages of Crile's method are apparent; but must be experienced to be fully appreciated. The anesthesia is continuous and no coughing when anesthesia is complete. The annoyance from hemorrhage is minimized, the operation shortened, shock and hemorrhage necessarily lessened, and the operation is made less disagreeable and trying to the operator."

**BOOK REVIEWS.**—*The Lancet-Clinic* calls attention to the flimsy way in which books are "reviewed" by most medical journals, and pays itself a well-merited compliment for its own excellent work in this line. But really, is it worth while for the medical journalist to truly review a book, and for the medical journal to give space to the review? It is worth \$100 to really properly review a book, by any man capable of doing it right. Who is to pay for this? Who will read it when printed? The time given by the writer to one volume of Sajous' work would have easily netted the reviewer \$500, and the reviewer regrets still that he did not take twice the time for it before publishing his sketch. Th ordinary medical journal has not the space for real reviews. This should be the function of a separate publication, a medical "Book News," which prints only reviews, and those of the very best. The ordinary doctor would not subscribe to it, but at a dollar a year it might possibly secure a supporting income. The advertisements should be exclusively of books. If such a journal could be conducted on a strictly impartial basis, not favoring books advertised by it, or published by its own printers, and made to pay expenses, it would meet a real want. Until then we shall continue to have "book notices" instead of real reviews.



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## DOES MEDICINE REALLY PROGRESS?

Progress in therapeutics, which for a time has been outstripped by surgery, but nevertheless is now rapidly coming into its own

**D**O we progress? That depends largely upon what we consider the criterion of advancement. If by progress we imply a larger knowledge of medical art, a more precise acquaintance with the nature and properties of *materia medica*, and a more rational application of therapeutic science, then I claim that our onward march has been crowned with triumphant achievement, to be regarded as an earnest of yet finer accomplishments to come. It is to be borne in mind that the marvellous results springing from an unprecedented study of exact science, aided by resources for investigation unknown to any previous epoch, have naturally tended to elevate bacteriological researches and surgery to a plane of positiveness not yet attended by the theory and practice of therapy.

Therapeutics is for the time outstripped by surgery, and its beneficent aspirations somewhat chilled by the consciousness of limitations unrealized in other fields of scientific thought and experimentation. Yet, upon reflection, it will readily appear that therapeutic skill is but the practical application of new truths unduly credited, in their finality, to other departments of intellectual effort designed to alleviate the sufferings of mankind. It remains for

medical procedure to give practical emphasis to the pathological relations embodied in the treatment of disease, the employment of serum-therapy, active principles of vegetable drugs, and the rational adoption of remedial agents derived from sources with which we are as yet comparatively little acquainted. In threading the wilderness of speculative therapy we still keep the path blazed for us by the masters of medical science, but the spirit of the age is with us, and we are constantly striving to find an easier exit from the perplexing labyrinth of experimental investigation.

Do we progress? Let imagination revert to that distant Egyptian epoch, when, as recorded in the Ebers' papyrus, if a newborn baby cried "ny" it was destined to live, but if its infant bleating should be "ba" it would speedily perish. We have passed a trifle beyond the Egyptian, I think, though the prognosis of the contemporary and ecstatic "agoo!" is not yet perfectly clear. The adept in pediatrics of today would hardly seek to soothe a crying child with "a mixture of fly-dung and poppy-juice"—although 4000 years' experience still leaves the potency of the latter drug supreme. Compared with this prescription, "goat lymph" is ideal simplicity, not to say weak-

ness incorporate. Who says we do not progress? Again, have we not mercifully advanced in becoming differentiated from the lofty and hopelessly exacting standard of personal perfection, little short of millennial requisites, which among the impertinent Hindus of old it was demanded that the family doctor should possess: "A fine person, absence of passion, decorum, chastity, temperance, amiability, veracity (Shades of Vishnu!), consideration for the sick (What! No nauseating yet beneficent bolus? Where would be our prestige?), generosity (Yes, the poor *we* have always with us), earnestness, freedom from boasting, secrecy, a desire for knowledge which scorns not even the lessons of an enemy (Where, then, were the blissful pastime of professional wrangles?), and finally, above all, reflection and independence of thought." I contend that in relegating to an effete epoch the angelic stature thus portrayed, we have not only progressed beyond expectation, but saved our noble profession from oblivion.

Perhaps the most remarkable achievement of modern therapy is the heroic dosage which has roused the slumbering enemies of our craft and compelled them to take shelter under the ægis of so-called "Christian science," the very name indicating the confusion of ideas resulting from abject terror in realizing our incomparable superiority. It is indeed fortunate for mankind that the hosts of the new Philistinism are concentrated in battle array—were they skilfully deployed, the task of annihilation were far more arduous. The heroism they display, however, under pressing difficulties is worthy of the greatest cause; and now that an inspired votary has twiddled his fingers at his nose in the face of fate by leaping from Brooklyn bridge without sepulture, we may expect further derision of natural laws by the unlimited consumption of green apples—with positively beneficial results—or the demolition of the entire menu, including coffee, with which, as the most deadly ammunition, the average metropolitan restaurant is equipped. Verily, these deluded brethren and sistren

may now and then—when therapeutic aid is summoned—lay the flattering unction to their souls that they illustrate "the survival of the fittest." As I say, this latest exhibition of esoteric doctrine, crystallized, or, let us hope, to be speedily *embalmed* in "Christian science," owes its *raison d'être* to the exasperating progress of ratiocative medicine, which, by reason of an occult polarity inherent in human thought, must necessarily find its incompatible in irrational hysteria, theosophy, spiritualism, palmistry, astrology, telepathy, Munchausenism, etc.—had not each cultus metaphorically embraced that "earnestly precious," yet inchoate seraph, the "New Woman?" And is not the celestial art of healing by miracle precisely such as—like homeopathic remedies—would naturally appeal to her good taste, with only grateful sequelæ? Yet her binding triumph is but negative—it is the supremacy, not of his *will*, but of her *won't*, to which "lovely woman" owes her present, so to speak, bicyclic ascendancy.

Progress is it? Why, our progress is so rapid and secure that the day is coming, but not next year, when by the law of evolution, boneset weeds will cease to grow, because there is no use for them in *materia medica*, since sickness is no more. It behooves us, therefore, lest so dire a contingency descend upon us unawares, to "gather them in, gather them in," that is, our outstanding fees, in the collection of which, I think I may safely aver, some of us even sweating, under the halo of ponderous achievement, have made absolutely no progress whatever.

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People seem not to see that their opinion of the world is also a confession of character.

—R. W. Emerson

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## THE "CRIME" OF MEDICAL DISPENSING

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*The Western Druggist* seems to see no difference whatsoever, between a physician administering a drug of whose properties it is his duty to know, and of whose clinical applications, he, and nobody else is the judge, and a druggist presuming to prescribe a drug across the counter for diseases of which he is not expected to and cannot possibly

know anything beyond the ordinary mis-knowledge common to the laity in general.

Mr. Engelhard is making a strenuous fight in favor of legislation prohibiting physicians the right of dispensing. Up to the present, however, we have not seen any evidence at all of his favoring similar legislation to prevent druggists from prescribing across the counter. Instead of that he is also strongly advocating legislation giving the druggist the title of "doctor." There does not seem to be any special reason for apprehending that any legislative body is likely to take Mr. Engelhard's view of the matter, but there can be no question of the popularity of his ideas among the druggists; and after all, that is probably what Mr. Engelhard is after—circulation for his journal. The druggist chuckles with glee over the hard kicks which it is giving the doctor, and subscribes for *The Druggist*. He opens it eagerly to find what new way Mr. Engelhard has devised to jab us with his hatpin.

Mr. Engelhard is entirely too sensible a man to take himself and his propaganda seriously. In private life he is by no means the bloodthirsty pirate one would imagine from his writings, but a very pleasant gentleman, with fine literary tastes and conversational qualities, a *raconteur* of ability, just such as one would enjoy meeting at the festal board.

There may be a good deal in this suggestion of not taking people too seriously. Many a time under the spirit of ill humor, vexation, etc., a man may be goaded to such a point that he simply has to throw off steam; and he lets himself out with a vigor which in that respect at least leaves nothing to be desired. It would not be fair to take this man exactly at his word. Just smile, shrug your shoulders and forget it; and the next time you meet him he will be "as pleasant as a basket of chips." He has forgotten all about the matter; or if he remembers it at all he is ashamed of having given way to his humor.

Somebody once complimented Mrs. Thomas Carlyle on the brilliant speech her husband had made the previous evening. She replied: "Yes, but suppose I had for-

gotten to give him his pill the night before!"

It helps a whole lot in our estimate of human nature, if we attribute such ebullitions to the fact that the evening pill had been forgotten. Let us look upon temper as a disease, and instead of meeting it with another passion for which the same excuse is not attributable, meet it coolly, dispassionately, and treat the cause with the best of all remedies—a kindly sentiment toward all other men that nothing of human vagary can ruffle.

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The language of excitement is at best but picturesque merely. You must be calm before you can utter oracles.  
—Henry D. Thoreau

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## THE UNHEARD MAJORITY

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The vast majority of mankind are tongueless. Take any association of men—political, religious or social—and you will find that a few members do all the talking, the rest remain mute.

But it does not follow, by any means, that it is only the men who talk who do the thinking. Far from it. You will often find that the men who think most, and think most deeply, are those who say little or nothing. They will sit quietly and let a few demagogues do the ranting, and a few busybodies who are wire-pullers do the managing, while the thinkers are too contemptuous of the whole affair to care to exert themselves. Where one man will get on his feet to make a speech there will be a hundred who merely think, "What's the use!" and thus they leave to inferior men the conduct of affairs.

Those who study the art of controlling assemblies know this very well. They know that there is an enormous amount of inertia in humanity, that every man has affairs of his own in which he is engrossed, and that the company matters, the corporation affairs, will be left in the hands of him who will take the trouble to attend to them, provided he does not go too far in outraging the feelings of his colleagues. They will bear a good deal, these busy men, these thinking men, rather than take upon themselves an additional burden.

So it happens that a few busy wire-pullers get together, devise schemes to elect themselves to office and wedge themselves in, so as to perpetuate their rule; while most of the other members see perfectly well and comprehend what is being done.

But it does not do to go too far in this matter, or to calculate too carelessly on the inertia of the many. The wire-pullers get to feel that contempt for the masses which the thinkers feel for them. The officials grow arrogant and careless, even insulting in their treatment of their colleagues. A certain United States senator once said: "The people can go to hell!" They didn't go; at least we think they didn't; but what has become of that man? He was not returned to his seat in the Senate, and we don't know today whether he is alive or dead. The scepter passed out of his hand.

This is where most men fail. Success brings about them a swarm of the supple class whose adulation is the only echo from the masses that comes to their ears. They fail to keep in harmony with public sentiment, and only appreciate it when they are dethroned.

Was ever a ruler dethroned whose successor was not met by popular acclaim? Did ever a new administration replace the old one, but that the besom of reform found many a muckheap to sweep out? The giant is never dead, he is only asleep; and some day a little shrug of his shoulder suffices, and the edifice so carefully reared upon his body crumbles in pieces like a card house.

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There are a thousand hacking at the branches of evil to one who is striking at the root.

—Henry D. Thoreau

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### MEDICAL EDUCATION

Dr. Beates, President of the State Board of Medical Examiners of Pennsylvania, has locked horns with some of the college authorities over the quality of the students they have been sending him. Out of 88 applicants, 51 failed to pass the examination. The deficiency was most apparent in the

department of physiology and pathology; next to this in chemistry and materia medica, diagnosis and hygiene, and in anatomy; while therapeutics, surgery and obstetrics each contributed a number of failures.

Dr. Beates attributes this to two causes: First, the students are received into the medical colleges without such preliminary education as would enable them properly to appreciate the teachings which are given them; second, the enormous disproportion as to the time allotted to certain branches. For instance, out of four thousand hours' teaching more than one-half is occupied by surgery. In medical jurisprudence some colleges allow several hundred hours to the course, other allow only four.

Dr. Beates concludes with these words: "Examination of men from all over the United States shows that a large percentage of them are both abnormally developed in certain directions and sadly deficient in others." It is evident that the scramble for medical students on the part of the colleges has not wholly ceased, and that the fees paid by these young gentlemen to the treasuries of the institutions have still their attraction. A curious example of Dr. Beates's first objection has just come to us. A person sent us a letter whose sarcasm, irony, contempt, detestation, and a whole lot of other ailments would have been crushing—but within ten typewritten lines he managed to misspell eleven words! We could not take such an illiterate personage seriously.

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### GOOD RESOLUTIONS

It is not yet too late to make some good resolutions. Here is one that we would suggest: That you do not let a day pass in which you do not acquire at least one single useful fact in regard to the therapeutic action and application of drugs. When your leisure time comes, even if it is just when you are ready to retire for the night, sit down with the books or journals which have accumulated, and go over them until you come upon some one fact with which you were not previously acquainted. Give

a few moments' thought to it, and store it away in your memory. It would not be a bad idea, if you have a daily calendar, to jot it down upon the corresponding day.

You are a wise man, indeed, if you do not find it comparatively easy to do this. We have studied drug therapeutics for many years, and yet we find little difficulty in accomplishing this fact ourselves. If your medical journals do not afford you the material for this increase of information, subscribe for others. Send for samples of all the journals that you think would be likely to afford you such information, and examine them; then make up your mind for yourself which of these journals is likely to be of most use to you personally—not the ones that give you information you think you "ought to have," but those that supply the information that you simply "must have." Then help yourself by helping its publisher.

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In proportion as we love truth more, and victory less, we shall become anxious to know what it is that leads our opponents to think as they do.

—Herbert Spencer

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## THE NORTHERN WINTER

We look out from our window on a country thickly covered with snow. The wintry blasts roar around the eaves. It is cold. We must bundle ourselves up in our heaviest clothing, guard our feet judiciously, keep our mouths closed and breathe through the nose while out of the house; for winter is upon us and the grip is here.

More than one hundred of the citizens of Chicago are dying each week of pneumonia. Many more are succumbing to various maladies from which they would have otherwise recovered were it not that to the original malady is superadded the malignant influence of the influenza bacillus, with all its powers of torturing and debilitating the patient. This alone is sufficient to turn the scale in many otherwise doubtful cases, and send the patient across the Great Divide.

Apart from influenza, the winter is not necessarily to be looked upon as an evil.

Exposure to cold increases the vital resistance to all noxious influences, and a man will live longer and have better health who remains in the north and faces the cold and discomforts of winter as a man ought to face evils. He will live longer, we say, will have better health, will be stronger, mentally, morally and physically, for the exposure to the life-giving though rude buffets of old Boreas.

But there be many thousands among us who are not in condition to withstand such rude treatment. Their vitality has already been sapped, and an application of the treatment which makes the strong man stronger, would be fatal to their delicate frames. This leads us to express again what we have already more than once put in words, and that is, our surprise at the ignorance of our fellow-citizens and of our colleagues in the medical profession. We have calculated that we could close our home in Chicago, send our family to the Gulf coast, rent a furnished house there for the winter and save money by so doing. The cost of keeping our house warm and lighted for the winter would alone pay the railroad fare and the rental of the southern home.

Along the coast of the Gulf of Mexico, from Matamoras to Key West, there are many locations in which the delicate northern visitor would find green grass growing and flowers blooming in the open air throughout the winter. The cold is tempered to an average somewhere about forty-five to fifty, occasionally dipping to forty, as a minimum rarely lowered. Living is cheap. The patient can have many more hours in the open air than anywhere in the North, and the railways make access so easy that most of these places are within twenty-four to thirty hours from Chicago; so that in case of necessity the bread-winner of the family can be quickly summoned.

The only reason that many thousands of our northern people do not spend the winter at these resorts is that they do not know of them. Of course we all know of the great hotels along the flowery Atlantic coast and their altitudinous rates. We are speaking

here of accommodations that come within the easy reach of people of average income, those to whom a monthly rental of ten dollars for a furnished cottage along the coast appeals. Why should you suffer the discomfort and the danger of a northern winter, when you are not compelled to do so?

Where to go? Write for information to any of the great railways running south, like the Illinois Central, The L. & N., or the Southern System. Better write to all of them, and then you will have abundance of material from which to make a choice.

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There is a purity which only suffering can impart; the stream of life becomes snow-white when it dashes against the rocks.  
—Jean Paul Richter

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### THE NAVY SURGEON

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The old fight between the line and the staff, in the United States Navy, has again come to the front, through the dispute concerning the command of hospital vessels. Surgeon-General Rixey claims that the hospital ships should be commanded by surgeons, his reasons being that these vessels are non-combatants, hence should not carry fighting men. The presence of the latter in command would deprive such vessels of neutrality to which they would otherwise be entitled under the Red-Cross rules, and which is necessary to them for the proper discharge of their functions as floating hospitals. The hospital ships belonging to the army are under the exclusive command of army surgeons. Other countries with, we believe, no exception, place their hospital ships under the command of the surgeons: and finally, there are not enough line officers for the active duties in connection with fighting vessels to spare any for such a purpose.

There seems to be no reason whatsoever why a surgeon should not command such a vessel, whose sailing and steaming is attended to under his direction by capable crews. The one objection to this claim which has yet been put forward by its opponents is, that Congress says that sur-

geons and paymasters shall not command ships. Of course this ancient regulation was made at a time when hospital ships, or any other kind of naval ships excepting fighting vessels, were not dreamed of. Consequently such a need did not occur to the minds of legislators. If there be any reason for refusing to the surgeon the command of these vessels, excepting this regulation, those reasons have not been made public. In the meantime Dr. Rixley's position appears impregnable.

The newspaper people are making themselves busy, and are industriously disseminating a totally wrong idea of the matter by their caricatures, representing surgeons in various positions giving directions to the mariners. The trouble is that these gentlemen have not seized the point at issue, know nothing whatever of the line and staff quarrel, or of the extent to which such bickering may be pushed.

An instance from the writer's memory: In one of the old vessels of our Navy there was an unusual amount of sickness, which the surgeon justly ascribed to the lack of ventilation on the berth deck, where the sleeping crew were wedged closely together. The air at night when the men were in their hammocks was something beyond description. It could only be described as a stench. The surgeon and engineer discussed the matter, put their heads together, and devised a means to overcome the difficulty, by carrying a ventilating shaft up through the captain's cabin. This was in time of peace, and the ventilator at any rate was a temporary matter which could be done away with at a moment's notice if desirable. The only objection to it was that the captain's cabin would have been somewhat disfigured by a canvas tube two feet in diameter, passing from the floor to the upper deck. The scheme was submitted to the captain, who promptly responded by calling the culprits before him and administering a severe reprimand to them, pointedly telling the engineer that his business was to attend to the engines and the surgeon that his duty was confined to attending to the sick, and recommending them to limit



themselves hereafter to their duties described in the Regulations. The sickness went on.

During the Spanish war it is said that the line commander of a hospital ship actually put in a claim for prize-money, as having with his floating hospital assisted in the capture of a Spanish vessel. Just what business a hospital ship, for whose functions neutrality is an absolute essential, had in taking part in the capture of a prize, is difficult for the average layman to explain; and this might justly form a subject for caricature.

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The years have taught some sweet, some bitter  
 lessons, none  
 Wiser than this, to spend in all things else,  
 But of old friends be most miserly.  
 —J. R. Lowell

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### GO SLOW, BROTHER!

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Go slow in the use of intraspinal—or intravenous—injections of magnesium sulphate in the treatment of tetanus. A late report of four cases treated in this manner showed three deaths, while the single recovery was in a case which the reporter believed would have recovered without the treatment.

Go slow in your advocacy or use of rectal anesthesia. One case reported showed that death resulted from necrosis of the large intestines, as the consequence of the action of the vapor of the anesthetic upon the tissues. Besides this, how are you going to stop the action of the anesthetic when it has already been injected into the bowel, and the patient shows signs of having had enough?

Go slow in your use of chloroform and ether, without a skilled and fully competent anesthetist in charge. A physician in New Hampshire has just been assessed in damages for the death of a patient to whom he was administering an anesthetic during confinement, he having no assistance.

Go slow in administering hypodermic injections of morphine to patients writhing in pains of hepatic or renal colic. The pain will antagonize and neutralize the hypnotic, and as soon as the stone is extruded the

pain ceases, the entire effect of the morphine will be exerted, and the patient may die narcotized.

Go slow in accepting negative evidence, especially when it is brought against new remedies or methods. Financial interests have long arms, and do not like to have their methods disturbed or their profits reduced. Their influence is liable to turn up in many unsuspected places. Remember that in all matters concerning the application of medicine you are judge and jury, and you do not have to take the word of any other living man. You can always try for yourself and you ought to do so; for if a new remedy is a good thing you cannot afford to leave the advantages it affords to your competitors. Above all things a physician must beware of getting into ruts and becoming old-fashioned, of closing his mind against new truths. When a man ceases to progress he commences to retrograde. Don't be a back number.

Go slow in taking sides in controversies. Hear the evidence on both sides and try for yourself. Assume always the position of judge and never that of advocate.

Go slow in accepting negative arguments. It never means much, and is always worthless until subjected to the crucial test of practical application. Do not conclude that because a remedy given to a man in a state of health has no apparent effect, it will have none when given to a sick man in whom that remedy is indicated. You cannot kill a dead man. Food will not relieve hunger in a man who is not hungry.

Go slow but do not stand still. Be always receptive to new ideas but never prejudiced. Look for self-interest everywhere, and discount every man's argument by the violence of his assertions. When a man shows evidences of personal animosity toward his antagonist, you may know from that alone that he is not endeavoring to tell the truth, the whole truth and nothing but the truth.

Go slow in accepting the pharmacist's estimate of his own knowledge of the science of medicine.

Go slow in commingling medicines. A multiplicity of remedies shows obscurity in

the mind of the prescriber. One remedy is enough if it is the right one; it is one too many unless you are sure of this. Never add a second remedy, unless you have a perfectly distinct reason for so doing. If you have such reason, add as many remedies as you have good reasons for employing.

Go very slow in administering vasoconstrictors when renal elimination is below par.

Go slow in beginning your other treatment before you have opened all the elimination doors and cleaned out the stable.

Go slow in trying to disinfect the alimentary canal before you have emptied it.

Go slow in making a diagnosis of very rare affections until you have eliminated the possibility of the commoner ones.

Go slow in calling in the surgeon, before he is really needed. When he is needed you cannot call him too quickly.

Go slow in calling in others to do the work you ought to do yourself. If you have not the nerve, cultivate it. If you have not the knowledge, acquire it. If you have not the skill, you will never get it by refraining from trying. If you are unfit to do the work of a doctor, get out of the profession.

Go slow in foregoing the benefits of organization because a few unprincipled managers misuse it. The more you realize this, the greater is it your duty to go in and actively intervene, to make the management what it ought to be.

Go slow, very, very slow, when you are tempted to speak ill of any other human being, especially of a brother practitioner in medicine. Nothing disarms an opponent so absolutely as a report to him of kind words you have uttered concerning him. There are mighty few men in the world of whom you cannot think pleasantly and speak as well.

Go slow in seeking to alter the habits of a lifetime, in those who are over fifty years of age.

Don't go slow, but come to a full stop, when contemplating any action which you

are not willing to have reported in the daily papers of your vicinity.

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Ah, but a man's reach should exceed his grasp  
Or what's a heaven for?

—Robert Browning

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## CALOMEL AND HYDROCHLORIC ACID

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Recently Dr. C. A. L. Reed, in one of his interesting sketches in *The Lancet-Clinic*, called attention to the supposed fact of calomel being converted into corrosive sublimate by the action of the hydrochloric acid in the gastric juice.

Dr. William J. Robinson calls attention to this as an error, stating that no reaction occurs even if the acid is present to the proportion of 30 percent. Nor does any reaction occur between calomel and sodium chloride.

To this Dr. Reed responds as follows: "It seems that the world does move, and it has moved since I learned my materia medica, when I was taught to alkalinize the stomach as a safeguard against the action of the hydrochloric acid upon calomel. I am delighted to know that the accepted truth of yesterday is the demonstrated error of today. Such is progress."

We quote this especially for the purpose of taking our hat off to Dr. Reed. He is one of the most eminent members of the medical profession of America. He studied materia medica a number of years ago, and employed what he had learned in the field of actual general practice. For a number of years he has been noted especially as a surgeon, and presumably during this time he has not paid special attention to materia medica. Like all other surgeons and specialists, he assumed that materia medica had made no progress since the time when he last studied it; but unlike his colleagues he is willing to acknowledge that this is an error when he has been shown.

One of the most prominent surgeons in Chicago refused to admit that sodium succinate could have any possible good effect in the treatment of cholelithiasis, and assured the writer that "he knew all about

drugs—that he had practised medicine for fifteen years, as a general practitioner." The fact was that he had never heard of sodium succinate, which had come into prominence long after he ceased to be a general practitioner. Nevertheless, he was not aware of his own ignorance.

We most earnestly hope that other specialists and surgeons will take to heart the lesson given in Dr. Reed's frank acknowledgment, and will ask themselves whether, while they have been giving special attention to their own department, there may not possibly have been made some advance also in drug therapeutics, to which they have given practically no attention whatsoever. A word to the wise is sufficient.

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Blessed is the man who has found his work,—and then—gets busy!

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#### BARIUM CHLORIDE

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*The Cleveland Medical Journal* calls attention to Pesci and his investigation of barium chloride. He concludes that barium chloride acts as a muscular excitant, the therapeutic dose being four grains a day, this causing in man an increase in arteriole tonicity. It acts profoundly on the myocardium and arrests the heart in systole. Its influence is exercised directly on the muscle without the intervention of the nervous system. In these doses it is well tolerated and may be given for ten days at a time, the dose being gradually increased to one and one-half or two grams daily, without causing nausea or vomiting like caffeine, gastrointestinal disturbances like digitalis, or renal troubles like calomel and the balsams. He calls attention to the possible danger of unduly increasing the blood-pressure, and especially advises its use in pleuritic effusions, in which he considers it the best or most in offensive diuretic.

Some day the profession will awake to the importance of considering vascular tension rather than direct heart-toning in all cardiac medication. They will then learn to appreciate why it is that the profession persists in looking upon glonoin as a cardiac

tonic when it is nothing of the sort; but indirectly relieves the heart, relaxing vascular tension when excessive and allowing the blood to flow more easily through the vessels with less heart-force. In this sense it is a better and truer heart-tonic than digitalis or any of the ordinary heart-tonics. It is because sparteine approximates this action that it has received the encomiums of such men as Pettey, who pronounces it the best of all heart-tonics. It is for this reason also that cactin has established itself so firmly in the affections of the clinicians who have been fortunate in securing a good preparation and have given it a good clinical trial. There are two ways of helping along a tired horse: One is the use of the whip, and we get this from digitalis. The other is by throwing off a part of his load, and this we get from cactin. There is a time for the whip and a time for unloading. A skilful physician will not mistake one indication for the other.

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#### "CANNED RESOLUTIONS"

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Many journals come to our tables on whose pages are spread resolutions by a doctor of more or less prominence, in some medical society, all emanating from the same source, all designed to familiarize the minds of the profession with the idea of permitting themselves to be limited in their prescribing to U. S. P. and N. F. preparations.

Certainly the pharmacist clique is active, and all the doctor has to do is to poke out his hands, and allow the shackles to be fitted firmly upon them.

These things, however, do not worry us. We know the ease and equanimity with which the average medical society passes resolutions, and the instantaneous lapse of memory, which each member experiences, as to allowing these resolutions to influence his conduct in the slightest. We have the testimony of no less a witness than Jones himself, that the physicians of San Francisco prescribe all the proprietaries they please, without regard to his lacerated feelings, or to the hundreds of resolutions formulated in the societies, journals and elsewhere.

The purpose of these resolutions, however, is probably not so much the hope of influencing the practice of the members, as it is to roll up an imposing official endorsement of the program. This program it will be seen is given piecemeal, and not in its entirety. Nothing whatever is said in these resolutions of the Engelhard end of the Hallberg-Engelhard combination. Confering on the druggist the title of "doctor," and legally forbidding the physician to dispense medicine, are two links of the chain which are conveniently ignored.

If we took these matters seriously, we would earnestly urge on our brethren in the profession, that they should look into the matter of the irrigated lands now opening in various parts of the country, as an eligible means of retiring from a profession in which they will soon be superfluous.

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And truth is this to me, and that to thee.

—Alfred Tennyson

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### RESTRICTED PRACTICE

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The code of ethics and the laws of medical societies restrict the membership to those who practise on the broad platform of using everything and anything that can be of use to their patients; and all medical societies, however broad in ethical matters they may be, still agree in declining to receive in their membership those who restrict their practice, as the homeopathsists used to do, and as those physicians did who limited their drug medication to remedies exclusively derived from the vegetable kingdom. If we are to be restricted to articles listed in the U. S. P. and N. F., and those which have received the approval of the Council on Chemistry and Pharmacy, what is the precise difference between the ethical standing we shall then occupy and that of the homeopathist who restricts himself exclusively to the remedies prescribed on the homeopathic law of similia?

This is only one of the difficulties into which the present policy of the dominating element in the Association is leading us. If the Council imposes upon the manu-

facturer of drugs such restrictions as that there shall be no label upon the package excepting the name of the medicine, no directions, no dosage, no therapeutic suggestions, no anything, how is this going to affect us in our practice?

Necessarily we shall have to memorize everything about the remedies we use. We must remember, and never forget, the composition and the dosage. We must know, and always bear in mind, the last alteration that was made by the U. S. P. in the strength of our aconite; and we must also know whether the pharmacist has furnished us our drug in accordance with this last alteration. Once every ten years we must forget our old dosage and learn the new.

Truly, there are a whole lot of things which the manufacturer has made easy for us in the past, but he must not do so in the future. We must believe that all manufacturers make their drugs of precisely the same quality, since the maker's name is not allowed to go on the package. We must no longer ask the druggist "whose fluid extract he employs," and make a difference as to dosage in accordance with our knowledge of the relative strength of these articles, as put out by different manufacturing chemists. They are to be all alike, or we must believe that they are all alike, and act accordingly. To ask the pharmacist the age of any preparation, and its quality at the time we are using it, will justly be looked upon as an insult by that gentleman and resented accordingly.

Here is our essential objection to the whole proposition—we must regulate our work by certain conditions laid down to us by other men, by those in authority, and no longer use our own free will and judgment. The thinking is done for us and issued to us in such form as the authorities deem best for us. The slightest evidence of a tendency to opposition, or of independence of thought, will result in the offender being cast out of the fold into outer darkness. He must not show his nose in medical meetings, for if he does, there will be a lot of hired bravoos there to set upon him. He must not announce opinions which are not

in accordance with the creed laid down by the authorities, or he will be denied the privilege of the floor. In short, we are face to face with a revolution as absolute as that which occurred when Cromwell turned the English Parliament out of doors by force of arms and parcelled out the Commonwealth among the generals of his army.

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He that cannot think is a fool,  
 He that will not is a bigot,  
 He that dare not is a slave.

—Inscription on the wall of Andrew Carnegie's library

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### DOSAGE AND RESULTS: THE DOCTOR'S RIGHT OF CHOICE. CRITICISM

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I have thought long on this topic. My purpose is to give you a little bunch of working ideas that, properly applied, will help you in many ways. I will be perfectly frank and simple; follow me carefully.

The only true basis for dosage is dose enough—enough so that the amount of drug present and acting in the system at a given time is competent, in its own particular way, to produce the result desired.

Granting the above to be a true hypothesis, result then depends on two things: First, the quality (uniform and fixed) of the drug itself and the perfectness and likewise uniformity of its pharmaceutical form, that it may be known at all times to be exerting the same influence (as nearly as this can possibly be accomplished); and, second, the resistance of the individual at the time, by reason of inherent ease or difficulty of action of drug through the nervous system and rapidity or slowness, completeness or incompleteness of assimilation, elaboration and utilization.

Therefore, there is no real, true, dependable dosage but "dose enough;" all else is guesswork, nothing more, nothing less, and leaves the doctor (and his patient) purely at the mercy of chance—what the strength and pharmaceutical quality of the drug he is using is and what the condition of the patient in hand may be.

This being the case, and it is an uncontrovertible fact, is it any wonder that differences of opinion arise as to drugs, cases and

results? Is it any wonder, with the no-longer-coverable uncertainties of the galenicals, known and acknowledged, that the profession is asking for something better, something on which they may depend? Is it any wonder, knowing that most manufacturers and the great majority of retailers are dominated by price, both in cost of drug and labor, and recognizing the fact that the uncertainty and irregularity of results depends largely upon this condition, that the profession is asking where it is at? Is it any wonder, with critics rampant, blatant and at best unfair in their deductions, basing all on chemical test and utterly ignoring clinical result, if not dominated by and subservient to interests it is designed to support, that the profession is either losing its independence of thought or looking for a new standard to which to pin its faith?

Fortunately, among the real thinkers, those who know and have confidence in themselves, those who know and know they know, and know why they know, the question is already settled; with others it is settling rapidly.

The *real man* will use what he knows to be good, what gives him the results he wants; and this regardless of what it is or where it comes from so long as it is a true, non-secret tool; and no carping critic, no would-be dominant power of organization, no force of man, mind or money, *no anybody, can, shall, or will be allowed to say him nay!*

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### TOO STRONG HENBANE

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*The American Druggist* for Dec. 23 directs attention to a spurious henbane which has appeared on the American market, which yields eight-tenths of one percent of alkaloid, apparently pure hyoscyamine. This is ten times the total quantity of alkaloid present in the official hyoscyamus, which moreover depends almost wholly for its medicinal action, not on the small proportion of hyoscyamine present, but on the hyoscine contained.

The *Druggist* says that if the spurious drug is used instead of the official the therapeutic effect will be widely different, even

if the total alkaloidal strength is standardized in accordance with the Pharmacopeia. In view of the fact that the official assay methods call for an assay of the total alkaloids only, without any differentiation between the hyoscyne and the hyoscyamine, the substitution of the spurious drug for the genuine might easily go undetected, save for the marked difference in the therapeutic effect.

This is a remarkable illustration of the impossibility of standardizing fluid extracts, etc., so far as the physician is concerned. In our work as physicians the large content of alkaloid would, of course, be desirable, even of this spurious henbane, and the same is true as to the manufacturer of the active principles.

But where does the poor druggist get off? The drug-handler will sell him anything that he thinks will answer the purpose, and if this drug has eight times the ordinary strength of alkaloid in it, he will furnish him eight pints of tincture or fluid extract from the same quantity of the hyoscyamus he formerly employed to furnish one pint. The advantages to him are obvious; and the galenic manufacturer may be depended upon to welcome the new hyoscyamus, which Dr. Lyon identifies as a native of Egypt.

This is all right, therefore, for the manufacturing chemist. But how about the physician desiring to get the effect of hyoscyne, who gets instead of that the effect of hyoscyamine, which is altogether another matter? Hyoscyamine is in many respects antagonistic to hyoscyne. To us as physicians it would seem incredible that conservatism can go so far as to cling to these antique preparations when, by taking the pure alkaloids, you can get exactly what you want without any uncertainty.

A more important consideration is the illustration which this gives of the wide diversity between the views of the manufacturing and the dispensing chemists, and the physician. The Pharmacopeia is the work of the former, the men, in other words, who are interested in the preparation and sale of drugs. That the official assays are based on the content of total alkaloid, and

not upon either of the antagonistic alkaloids present, illustrates the fact that the nature of the alkaloid is of no consequence whatever, and is not taken into consideration by the pharmacist.

Not only is this the case, but the manufacturing chemist is unable to understand why we are not satisfied with the goods he gives us, and with the tests which he makes as to their alkaloidal content. That is because he is a chemist, and not a physician. Being strictly a chemist and not a physician, he cannot see why we should desire the genuine salicylic acid from the oil of wintergreen, and not be contented with the synthetic preparation; why we should demand that our hyoscyne should be obtained from hyoscyamus and not from some other plant. He fears, probably, and with reason, that some day we will ask if we cannot have pure morphine, and not one mixed with codeine. To him there is sufficient similarity in the action of these two alkaloids to justify him in using the process, which extracts both at once, instead of the one which extracts the morphine only, and leaves the codeine. The same holds good in regard to quinine and quinidine. Few physicians know, possibly, that no distinction is made between these and, that our so-called quinine is really a mixture of quinine and quinidine—that is, when it is not cinchonidine or cinchonine.

The assays of *nux vomica* and *ignatia* tell us of the mixed alkaloids, strychnine and brucine, ignoring the fact that one being four times the strength of the other, there is a very considerable difference in the dose of two different preparations, even when the total alkaloidal content is the same. The chemist objects to our demand for absolutely pure emetine, because it is a matter of difficulty to separate the other two alkaloids of *ipécacuanha* from this one. Consequently he tells us that we should be content with what was good enough for our fathers, and not go about bothering him on such subjects. He would be greatly relieved if we would simply give such remedies as he has in stock, and not give him any more annoyance or expense about such

matters. He has gone to the trouble to get up a pharmacopeia which contains such remedies as he thinks ought to suffice for all our use, and he objects to our using anything else. He objects to all prescriptions of "hyoscine from hyoscyamus," when he wants to supply scopolamine, which costs him about one-third as much. He objects to our prescribing anything specifically, so as to prevent him from running into his medicines whatever dead stock he has, of which he is anxious to get rid. Really there are a whole lot of things which the druggist wants us to do, for *his* convenience and profit. Our own preferences as physicians, and the welfare of our patients, as such, do not enter into the calculation.

Whatever is it we have done to give these gentlemen the impression that we are such imbeciles as they evidently deem us?

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The blessedness of life depends more upon its interests than upon its comforts. —George Macdonald

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### THE SURGEON IN HIS RELATION TO CRIME

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A man is brutally murdered; in defending himself he wounds his assailant, who seeks a surgeon for relief. The officers are baffled, the criminal cannot be apprehended. Does the surgeon become *particeps criminis* by shielding the assassin?

An unmarried woman seeks a midwife who in attempting to commit an abortion punctures the uterus and colon; peritonitis follows, a surgeon operates too late and the woman dies. Shall the doctor protect the good name of the family by returning a death from perforation of intestine, or shall he notify the coroner and lay bare the secrets of the dead, in order not to shield the woman guilty of manslaughter?

Shall the surgeon protect the innocent by betraying the confidence of his patient—as by permitting an acute gonorrheic to marry a pure girl over his protest? A case involving a question of somewhat similar character was lately tried in Berlin (Report by Kahn, *Berliner Klinische Wochenschrift*, Dec. 2, 1907). A Berlin physician warned

the mother of a recently vaccinated child against a niece living with her, whom he was treating for acute syphilis at the time. The Court of Appeals acquitted the physician, after sentence by a lower court in the suit brought by the syphilitic. The judge in this case approved the physician's realization of a moral obligation.

As a matter of fact it would seem that many questions pertaining to "professional secrecy" are as yet unsettled by law—some states requiring physicians to reveal certain facts in court which would not be permitted to be given in other states.

In his relation to the public, not the courts, should not the doctor be guided in great part by his own conscience and judgment, rather than by any set rule or written law? If by keeping silent gross wrong is to be committed, as a matter of justice to the innocent may he not sometimes break the oath of professional secrecy he is presumed to take on his entrance to the medical profession?

But if it is the mere surrender of a fugitive from justice to the pursuing officer, would we applaud a breach of his assumed obligation to keep inviolate the secrets which come to him in his professional capacity? In the case of death from criminal abortion, is it sufficient that the surgeon should warn the offender that a repetition of abortion would be reported to the proper officers? Without doubt he would win the approval of the court by so reporting and convicting the dangerous abortionist. Yet—when a *doctor* commits abortion (as, alas! some do!) and pelvic peritonitis follows in case after case, is the consulting surgeon justified in refusing to operate to save the lives of the victims? And should he, or should he not, deliver the criminal doctor over to the authorities, or go on protecting him by rescuing his patients from the clutches of the coroner?

These are among the most vital questions that come to the practising physician. Our relations with our patients, with the community, with the law, with our profession and with our own conscience, give the most perplexing of problems for our

elucidation. Grant that all we wish is to do right, that we most earnestly desire to do exactly the right thing—the question here is, as to what is right? On one point we may be clear—we have no right to withhold our professional aid from a suffering human being, no matter whose may be the fault, or what fault induced the suffering. We are not detectives, but necessarily we must be guardians of the public morals to a certain extent, although we must not arrogate to ourselves the functions of judge and jury.

The discussions of the legal relations of the physician to the community might with propriety form a part of our post-graduate course, and by no means the least important or the least needed part of it. However, we wait for expressions of opinion from our readers, not only on the questions asked herewith, but on any other medicolegal points which may occur to them.

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Some people are always grumbling because roses have thorns. I am thankful that thorns have roses.

—Alphonse Karr

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### SHOULD SURGICAL INSTRUMENTS BE PATENTED?

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In the November number of the *Detroit Medical Journal* there is a brief editorial on this subject, with a letter from Roswell Park, and reply from J. F. Hartz, President of the American Surgical Trade Association. This brings up an exceedingly important matter and one which it is discreditable to the common sense of the American medical profession to allow to remain in its present condition for so long.

Let us take a glance at the ethics of the question. To surgical instruments as to remedies of the drug sort applies the rule of ethics that the physician must not exact from his colleagues anything in the line of a royalty. He must freely give to the profession which has given so much to him, the products of his best labors, without price and without other recompense than the consciousness of doing good and the increase of his standing in the profession.

Good! Amen! Not one of us has a particle of fault to find with that, although by a curious freak of ethics it does not apply to medical books, which the physician may copyright and exact at his pleasure a royalty. There is no ethics in this distinction—it is simply custom.

But will anybody tell us what particular clause of the code of ethics compels us as physicians to give to the drug trade the same advantage, or to the surgical instrument manufacturer? Neither of these parties is in our profession. Neither of them has any right to claim the free gift of the products of our brain. If one of us devises a useful and valuable formula, or useful and valuable instrument, we give it to the profession, but why should we give it to these other fellows?

Besides this, there are grave objections both as to drug formulas and to surgical instruments; when these are placed freely in the hands of the trade the author loses the control over them which insures their being prepared in accordance with his specifications.

The consequence of this has been, in the case of several worthy and exceedingly valuable surgical devices, that they have been driven completely out of use by the imperfection of the manufacturers. We refer the reader who may be curious in this matter to the history of the Murphy-button, and of the stethoscope devised by Dr. William Porter of St. Louis.

Between members of the medical profession this imparting of knowledge of good things is reciprocal. What we give to our brethren they return to us many fold. That is our right. Between us and the drug and surgical-instrument trade, and the community at large, it is another matter. Being physicians does not exempt us from paying full royalties for any patented or copyrighted articles we may have occasion to use. If we want to buy a stove, we are not exempted from paying the royalties demanded by the inventor; and this applies to the telephones we use in our office, and the automobiles which carry us to see our patients.



Then, as there is no reciprocity on their part, why should they expect to enjoy immunity from recompensing us for our inventions?

The whole subject ought to be ventilated, and is open for discussion by our readers. Suppose we take this as a proposition for discussion: That the physician should be entitled to receive royalties from every drug manufacturer who presents for sale his formulas, with or without his name attached, and advertises it to his customers; and the same should hold good as to surgical instruments invented by physicians, the manufacturers to pay royalties to the inventor; in both cases the manufacturer to be under the control of the inventor, who shall have the privilege of forbidding the manufacture and sale of articles under his name which do not come up to his specifications.

In the case of surgical instruments, it may be objected that in many instances this exacts royalties from the physician since it is he who buys and pays for them. As to drugs it is different; they go to the patient, to the public, who are not entitled to ethical immunity. But there are many surgical devices which are purchased by the patient and not by the physician, such as trusses, braces, bandages, and dressings, of innumerable variety. For these the inventor might justly ask for and receive a royalty. However, we are not expressing opinions definitely on the subject, but simply proposing the question for discussion.

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#### A RARE CHANCE: FORESIGHT FIFTY PER ANNUM

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The world does move. At the expense of fifty dollars *per annum*, in advance, you may, "with the understanding that you will make an honorable and Christian-like use of it," receive a monthly schedule, which will give the favorable and unfavorable conditions of the coming month for each day and hour. This is based on the use of the "chemical telescope, by which the science of astrophysics is thoroughly and exhaustively exploited;" also the subscriber. This will enable you to avoid doing the

wrong thing at the wrong time, and to select propitious periods for performing important affairs; giving you invaluable service in handling people, offspring, setting dates and conducting banquets, parties, entertainments, traveling, business, etc.

Surely, life will be worth living when you can obtain all this, and know exactly the right time of doing everything, avoid all the mistakes which you would otherwise make—and all for the sum of fifty dollars a year in advance! Just look back over your past life, and see whether you would not have been willing to pay fifty dollars a year to avoid all your mistakes! One little qualification is necessary, and that is that you should be superstitious enough to be willing to surrender to the Astrophysics Observatory fifty dollars on their personal claim of the power to work such little miracles. We are some gifted in this way ourselves; and an inheritance from our Scottish forbears enables us to affirm with the utmost confidence that—now is the time to subscribe to CLINICAL MEDICINE.

After all, *does* the world move? Only the topmost layer of humanity is in motion, as in the ocean the huge underlying depths are unaffected by any commotion which takes place on the surface. The vast masses of humanity are as superstitious and prejudiced, as when in ancient Accad they muttered incantations and tied knots to ward off the evil influence of the Demon of the Northwest Wind.

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#### THE USE OF SALINE CATHARTICS HYPODERMICALLY

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*Merck's Archives* for December quotes MacCallum's investigations "On the Mechanical Action of Saline Cathartics" in causing movement of the intestines and flow of material from the gut. MacCallum stated that when barium chloride, sodium citrate, sodium sulphate, magnesium sulphate, sodium tartrate, or sodium phosphate is introduced into the stomach of a rabbit they cause catharsis; and the same action was noted when the same salts were introduced beneath the skin by hypodermics

or when injected into the blood-vessels; these salts acting in a double fashion by increasing the secretion of fluids passed into the intestinal canal, and by stimulating the peristaltic muscular movements of the intestines. When calcium salts were introduced into the body, these symptoms were all delayed or destroyed. He concluded that salines acted not only on the nervous system but on the muscle fibers and secretory tissues of the intestines, either directly or indirectly, through the plexuses of Auerbach and Meissner.

Frankl, putting MacCallum's position to a severely critical analysis, finds some of his claims incorrect. He could obtain no cathartic action from sodium sulphate introduced beneath the skin, in fact this caused a slight obstipation. The introduction of salines into the blood-current produced no permanent action on the peristalsis of the intestines. Calcium chloride in small doses injected into the blood-stream caused no perceptible delay of peristalsis; in larger doses it acted as an obstipant. Frankl therefore declared that the studies of Buchheim and Matthew Hay were to be followed, rather than those of Loeb and MacCallum.

#### NEPHRITIS: SOME INTERESTING POINTS

William Henry Porter contributes a thoughtful paper on nephritis to the June number of *American Medicine*. The conclusions he draws are as follows:

1. All therapeutics, to be scientific, must have for the primary object the removal of the causative factors that are producing the pathologic conditions.

2. There are three general subdivisions of the renal lesions classed as "Bright's."

3. Each of these subdivisions is further subdivisible, both from a pathologic and clinical standpoint.

4. Hemorrhagic nephritis as such does not exist.

5. The so-called hemorrhagic nephritis is an occasional modification of the chronic parenchymatous change.

6. Most renal lesions are noninflammatory processes.

7. Most renal lesions are due to overwork of these glands at a time when the nutrition is impaired.

8. The one exception is in connection with the class known as an exudative or inflammatory process. Here all the phenomena of a true inflammation exist.

9. There are three well-defined causative factors which enter into the production of the parenchymatous group of lesions.

10. These three factors, plus five others, enter into the production of the interstitial and diffuse group of lesions.

11. Both the overuse and defective supply of the starches, sugars, and fats are important factors to be considered in the production, maintenance, and cure of these renal lesions.

12. Nervous overstrain is an important factor which often acts indirectly in exciting and maintaining renal affections.

13. Treatment is to be directed both to prevent and to cure.

14. Treatment consists chiefly in the correct apprehension and removal of the causative factors.

15. The successful management of this class of pathologic lesion calls for an extensive and thorough knowledge of chemico-pathology and dietetics.

16. Drugs are not in any sense curative; but when rightly used can be made to produce wonderful results by enabling nature to utilize successfully the natural food substances; thus nature can be made both to remove the cause and repair the damages.

17. These renal lesions when studied purely from the histologic standpoint are incurable.

18. Considered from the physiologic and chemical standpoint, a large percent are curable.

19. Viewed from this standard it is difficult to see how surgical interference can, even in a limited degree, be made to remove the underlying factors, hence such measures cannot be classed as scientific.



## ACID AND ALKALINE THERAPY

Normal and abnormal alkaline and acid conditions within the human body. The methods of treating successfully variations from the normal due to these conditions

By EDWARD C. HILL, M. D., Denver, Colorado

Editor of The Denver Medical Times

THE human body as a whole is alkaline to litmus. The total alkalinity of the organism is equivalent to 60 grams of sodium hydrate. The alkalinity of the blood is proportional to the number of red cells, and is normally equivalent to 180 mgm. of sodium hydrate per 100 grams of blood. The normal alkalinity of the blood is diminished by excessive formation of sulphuric, phosphoric, sarcolactic and volatile fatty acids in the rapid catabolism of great muscular exertion and fevers, and in anemia, nephritis (hydremia), cancer and cholera. Strictly speaking, blood is neutral, since it contains no more hydroxyl ions than does water. Its alkaline reaction to litmus depends on the sodium ions present.

### *Blood and Secretions are Alkaline*

All the secretions (except mucus and gastric juice) derived from the blood are likewise alkaline, the reaction in each instance depending chiefly on sodium bicarbonate and disodic phosphate. High alkalinity of the blood and secretions is favored by fruit, milk and garden vegetables—chiefly by the potassium content of these foods. The normal alkalinity is lessened by much meat and broths, by whole cereals and mineral acids. Plain starchy foods, such as rice

and blanc mange, may obviate acidosis in diabetes by saving the tissues through the ready oxidizability of the former. Deficient alkalinity of the blood is characterized clinically by pains and cramps in the muscles and by a tendency to restlessness, convulsions, stupor and coma, most marked in the diabetic acidosis.

An acid (to litmus) state of the saliva (rheumatism, diabetes, mercurial salivation) favors pyorrhea alveolaris and the rapid formation of soft, light-colored tartar. Lactic-acid fermentation in the mouth predisposes to dental decay. The saliva is intensely alkaline in ulcerative stomatitis.

### *Source of the Natural Acids*

The natural acids of the human secretions are derived from the blood by special ionic interchanges. The hydrochloric acid of the gastric juice is probably produced by reaction between sodium chloride and sodium bicarbonate, forming hydrochloric acid and sodium carbonate. The chief use of hydrochloric acid is as an antiseptic. Its presence is essential to the action of pepsinogen, but excess of the acid may restrict digestion. An ulcerating growth yields an alkaline juice, neutralizing hydrochloric acid, but benign pyloric stenosis is not seldom ac-

accompanied by hyperchlorhydria. The acidity of the gastric juice is usually decreased in asthenic and atrophic, but increased in irritable and hypersthenic, conditions. Fear, worry and most other painful emotions diminish the digestive secretions generally, thus leading to loss in the germicidal power of the gastric juice, for instance in cholera, and so favoring the onset of the specific infection. The alkaline saliva evokes the acid secretion of the stomach, and this, in turn, is essential to the completion of secretion, the activator of the pancreatic secretion. Mineral acids and those formed by fermentation of carbohydrates oppose protein putrefaction, and there is no better food than buttermilk for intestinal auto-intoxication.

The acids, mainly phosphoric and sulphuric, formed by oxidation in the tissues, are normally neutralized by fixed bases of the organism; or, if in great excess (diabetes, emaciation), by the ammonia also formed in the cells and intercepted by the acids before its conversion in the liver into urea. Lactic and fatty acids (from fermentation) are abundantly present in human excretions. They are sometimes absorbed in excess from fermentable substances (oatmeal, buckwheat) in the alimentary tract, and irritate the skin when excreted in the sweat, causing itching and eruptions.

#### *The Tendency to Deficient Alkalinity*

There is an increasing tendency throughout life, particularly in high altitudes (low oxygen tension, with relative increase of carbon dioxide) for the blood to become deficient in alkalinity. This proacid drift depends partly upon continually increasing catabolism, and largely upon luxurious modes of life—overeating, rich, fermentable foods. The sclerogenic effect of acids in the circulation leads to arteriosclerotic interference with normal cell nutrition and oxidation, with resulting excess of purin bodies, which further lessen the alkalinity of the blood. The so-called gouty or rheumatic diathesis, manifested by pains in the less alkaline tissues (cartilages, tendons, fasciæ, joints) is often due primarily to

hypoplastic defects of the circulatory organs, with resulting low-grade nutrition and function of the cells. On the administration of alkaline salts the oxidizing power of the blood is much enhanced, and irritating suboxidation products do not accumulate in excess.

In acute rheumatism the specific action of salicylic acid is greatly favored by the conjoint administration of alkalis. Many obscure aches and pains in connection with barometric neuroses are benefited by alkaline medication along with vasomotor tonics and free elimination. The euphoria which a great many persons experience from a diet composed largely of fresh fruits and vegetables is due chiefly to the potassium content of such food and to the alkalizing effect of the organic acids changed by oxidation in the blood-stream to carbonates. Potassium is a more important constituent than sodium of the blood-cells and fixed tissues, and is especially indicated in scurvy—best given in an organic form, such as potatoes or orange or lemon juice (potassium combined with citric acid).

#### *The Most Useful Alkaline Salts*

Alkaline salts most generally useful for oral administration are sodium bicarbonate, potassium bicarbonate and disodic phosphate (U. S. P.), the last-named salt being of great service in lithemic attacks with constipation. These salts should be given well diluted in water, preferably on an empty stomach for systemic effect, and if very distasteful to the patient, the solution may be taken through a glass tube. They should be given in sufficient dosage to keep the urine nearly (or for a short time) quite alkaline. In emergencies, as in diabetic coma, one-half to one ounce of sodium carbonate (more alkaline than bicarbonate) in a liter of water, should be introduced into a vein (hypodermoclysis might excite gangrene) or into the colon once or more times daily. In such cases it may do more harm than good to put the alkaline solution into the stomach, since gastric absorption is generally and gastric motility is under the circumstances almost *nil*.

For a local alkalizing and sedative effect sodium bicarbonate is probably the most eligible remedy of its class. As a mouth wash it often relieves the uncomfortable feeling due to dentine rendered supersensitive by an acid saliva. Burning and tenesmus at the neck of the urinary bladder are much alleviated by the use of this preparation either per os or per rectum. Applied to the skin in powdered form or strong solution, it is, next to phenol, our most effective antipruritic, and allays the sting of nettles and bees, due to formic acid.

#### *Treatment of Gastric Hyperacidity*

Gastric hyperacidity due to excess of hydrochloric acid (hyperchlorhydria), as in neurotic hypersthenic gastritis, gastrosuccorrea and gastric ulcer, is best treated with a diet (fats and oils, eggs, bland starchy foods) which inhibits in a measure hypersecretion, but for the burning pain alkalis (sodium bicarbonate or citrate, milk of magnesia), given in ice-cold water, are very helpful at the time. Milk of magnesia is a valuable antacid remedy in the acid constipation with colic of infants and children.

Organic hyperacidity (lactic, butyric, acetic) of the stomach is caused by fermentation of sweets and fats and is favored by defective motor function. For this condition, as for simple atonic hypochlorhydria the (most frequent form of dyspepsia) hydrochloric acid in full doses (10 drops of concentrated, 30 drops of dilute) is our best remedy in most instances, and seldom needs to be accompanied with pepsin. In the writer's observation, the acid is best taken just before meals in one-half glass of water, slightly sweetened if desired, and the dose may be repeated once or twice after the meal. A glass tube should always be employed, and the mouth thoroughly rinsed

with sodium bicarbonate after taking the acid. The mineral acids (hydrochloric and nitrohydrochloric) are likewise of service as stimulants to hepatic and pancreatic secretion, and either of these two acids or aromatic sulphuric acid is often an efficacious astringent in curing a chronic lienteric diarrhea when other means have failed. They are also of some service in the treatment of flatulent indigestion and its accompanying oxaluria. Lactic acid antagonizes putrefactive changes in the intestine and may do much good (as buttermilk) in the summer complaint of infants.

#### *To Preserve Urinary Acidity*

Mineral acids have been given by the mouth to preserve the normal slight acidity of the urine in phosphaturia and alkaline fermentation in the bladder, but salol and benzoic acid and its salts are much to be preferred for this purpose.

Hexamethylenamin (20 or 30 grains daily) conserves this normal acid reaction in purulent conditions by the antiseptic action of the formaldehyde liberated in the kidneys. For simple phosphaturia without pus formation, the acid sodium phosphate ( $\text{NaH}_2\text{PO}_4$ ), to which the normal acidity of the urine is chiefly due, may be given in doses of two drams daily.

The caustic and astringent effects of mineral acids and tannin depend mostly upon their power to coagulate albumin and globulin. Lunar caustic burns by reason of its nitrate ion, and stains the skin because of liberation of black metallic silver.

It is doubtful whether mineral acids are ever indicated for systemic purposes, since they would exert a deleterious action upon the tissues by affecting the alkalinity of the cells, the normal irritability of bioplasm, and that free internal respiration upon which good health is so largely founded.



# MYALGIA AND HOW TO TREAT IT

The varieties, causes, symptomatology and treatment of myalgia, improperly called "muscular rheumatism." A resume of some old ideas with the description of some new ones

By WILLIAM FRANCIS WAUGH, A. M., M. D., Chicago, Illinois

UNDER this term is comprised a series of painful affections of the muscles. Very commonly these are known as muscular rheumatism—a bad term, for the connection of these maladies with true rheumatism has never been shown, and it occasions confusion, as the term rheumatism should be confined to the diseases of the fibrous structures around the joints, and not made to include other painful affections of a different nature.

## *What is Myalgia?*

Myalgia may occur in any muscle or any group of muscles which have been subjected to cold, severe strain, or long-continued overexertion of such a character as to induce degeneration of the muscular fiber, with hyperplasia of the connective tissue. The term may be used to include the soreness of muscles following direct injury. Acute attacks may be induced by exposure to a draft when the patient is exhausted by physical exertion, or depressed by cold and wet. Drivers sitting on the exposed seats of their wagons for a long period, during storms of sleet, are liable to have acute attacks in the muscles of the back. Laborers stooping over their work in time show the chronic manifestations of this disease, also in the muscles of the back. Whenever the occupation entails any special strain on any one muscle or any set of muscles, these will show myalgia sooner or later. Gout and asthenia are underlying causes. Strains are particularly liable to be followed by myalgia, when due to severe muscular exertion in those whose sedentary habits have allowed their muscles to fall away. The use of the corset induces degeneration, from disuse, of the intercostal

muscles, and this gives rise to that form of myalgia known as pleurodynia. Torticollis is a term applied to myalgia, of the sternocleidomastoid muscles, the trapezius, or both. Occurring in the lumbar muscles, the affection is known as lumbago, and this may be either acute from exposure, or chronic from continued work. Occurring in the muscles of the scalp, from exposure to cold and wet, it is known as cephalodynia. Torticollis is most common among children, pleurodynia among women; the other forms, acute and chronic, among men. Almost any group of muscles may be involved.

Inflammation may be present in the muscular fibers, in the connective sheath, the fasciæ, or in the bone or periosteum to which the muscles are attached. The muscular tissue in chronic cases is found to be in a state of degeneration, the connective tissue being hyperplastic. The muscle-fibers show round-cell infiltration, increase of the nuclei, and hyperplasia of the surrounding connective tissues.

## *The Symptomatology of the Disease*

The symptoms consist in local pain and tenderness, increased when the muscle is put upon contraction; swelling, redness and heat are not usually present. The tenderness is marked in a few cases, but may be very slight, and in chronic forms only elucidated by firm pressure. The pain is confined to the spot at which it first appears. It is worse at night and previous to atmospheric changes, that is, a rapid rise or fall of either the barometer or the thermometer. In acute cases it may be lancinating and severe; in chronic forms it is usually a dull ache, accompanied with stiffness. It may be relieved by uniform pressure, and is increased by pressure on points. In

acute forms severe muscular cramps are liable to be present. Acute attacks are likely to occur during sleep, on the night following the exposure to cold and wet or any severe exertion giving rise to the attack. Sometimes an attack occurs after a strain, with such suddenness as to lead to the diagnosis of rupture of a muscle, tendon or some similar structure having occurred.

The patient in acute forms is absolutely unable to move the affected muscles, and any attempt at motion results in the severest aggravation of pain. In chronic forms the pain and disability are most common when the patient arises, and after moving about they generally wear off for the time, motion becoming easier. But if the work which kept the muscles on the strain is continued, it will not be long until the pain recurs and increases to such a point as to compel the patient to stop the occupation which puts the affected muscles in action.

#### *Torticollis and Pleurodynia*

Torticollis is more frequently acute than chronic, occurs in children rather than in adults, and is generally unilateral. The neck is stiff, the muscle contracted, and the patient's face turned away from the affected side. This affection is sometimes caused by inflammation of lymphatic glands lying underneath the myalgic muscles.

Pleurodynia is more common upon the left side. When acute, every motion, especially such a strain as is occasioned by coughing or sneezing, is expressively painful. In women, when caused by the disuse of the intercostal muscles due to the practice of wearing the corset, the pains are commonly felt when this garment has been removed, and the affected muscles are brought into exercise. For this reason the victim generally denies the corset as a cause, declaring that she only feels comfortable when the corset is on, as at that time it prevents motion and consequently pain. In men the pectoral muscles are sometimes involved, as in occupations such as that of the shoemaker sewing his shoes, or the tailor plying his needle. The pain then becomes so severe that after an hour

or more the victim is compelled to stop his work, relax the affected muscles, and allow them rest until the suffering has so far subsided as to allow him to resume his work.

Myalgia of the abdominal muscles is exceedingly common in individuals who sit for long periods in such a way as to throw a continuous strain upon the muscular planes covering in the abdomen. Many instances of this sort may be detected by the physician who is on the watch for them. Many a man sitting at his desk in an hour or two experiences considerable pain, either in the abdominal muscles or in those of the upper back as well as in the lumbar region. The pain is relieved by stretching or changing the position, or may be prevented by having a chair suited to the individual, with such a back and arms as afford due rest. The writer can speak from personal experience here, having for years suffered from various forms of myalgia of this description, until he was fortunate enough to obtain a chair which seems so perfectly fitted to him that since this acquisition he has scarcely known what muscular pains are.

#### *Lumbago a Common Disease*

Lumbago is very common in men who use the pick or the shovel. Among farmers, therefore, few will be found without a pain or stiffness in the back.

A morocco dresser applied to the writer for relief from rheumatism. A faradic battery was set in motion, the patient taking the positive pole in his hands, while the negative was passed over the muscles of his back in succession, the current being strong enough to put these muscles in contraction. No pain was experienced until the latissimus dorsi on the right side was contracted, when at once the patient cried out, saying that that was his "rheumatism." Investigation showed that he was in the habit of stooping over the skins which he was dressing, which, when completed, he tossed up to a shelf behind him and above his head, the motion wrenching the affected muscle.

Many similar cases have occurred to the writer, in which the application of the

faradic current has revealed in muscles the source of pains which were supposed to be due to much more serious and deeper-seated maladies.

The constitutional symptoms are slight. Some rise of temperature may be shown in the acute forms caused by exposure or by traumatism. This simply indicates the amount of acute inflammation which is present, and to this extent the case should be denominated rather a myositis than a myalgia.

Although Leube classes myalgia as true rheumatism, he acknowledges that heart-lesions are not to be looked for in these cases. When one considers the immense number of cases of myalgia, and their long continuance, this seems significant of the correctness of the writer's position, that rheumatism has nothing whatever to do with this malady.

W. Gilman Thompson says that he has observed oxaluria in some cases. It is probable that oxalates or other irritating substances circulating in the blood may increase the irritability of the muscular fibers and their surrounding connective tissues, and render them more liable to this disease than otherwise. The same may be said as to fecal toxemia.

#### *Prognosis and Diagnosis of Myalgia*

The prognosis depends upon the ability of the patient to avoid the causes of the malady. Immense improvement occurs when this precaution is taken and appropriate treatment administered, even when the muscles are far advanced in degeneration. We are not claiming that destroyed muscular fibers can be rebuilt, but if all symptoms of the disease vanish and an average amount of muscular ability is restored, the case is "cured" to all practical intent; and this as a rule can be accomplished.

The readiest means of diagnosis is the use of the faradic battery, as above described. This shows that the pain is developed by putting the affected muscles in a state of contraction, and prevents the mistake of ascribing to myalgia pains which may be due to underlying aneurism, disease of the kidneys, the

lymphatic glands, or of other organs. Inter-costal neuralgia differs from pleurodynia in that the former is a paroxysmal affection, showing itself by pain in the distribution of one or more of the intercostal nerves, with tenderness at the points where they escape from the foramina, and by the absence of muscular pain on faradic contraction, unless pleurodynia complicates. Pleurisy is indicated by its physical signs, as are also structural diseases of the lungs.

Periostitis, syphilitic and otherwise, presents its own symptoms; occurring at certain locations on the bones, with physical signs, and subsiding promptly on the administration of specific remedies. The muscles are not affected unless myalgia is also present. In neuritis we have excessive pain and tenderness along the course of the nerve, whose inflamed trunk may be detected on palpation. Paralysis and contractures also may accompany it, as well as disorders of sensation, if sensory fibers be associated in the nerve-trunk.

#### *The Treatment of Myalgia*

In acute myalgia the first indication is absolute rest. In the case of lumbago this is best secured by applying an apparatus in the guise of a corset. The writer has frequently used a broad flannel bandage, reinforced by strips of stiff pasteboard, or even of wood, the object being to prevent motion of the affected muscles. In less acute cases the patient can lie quiet in bed, being cautioned not to move the affected parts—a caution which is scarcely necessary. Hot applications give relief, and when the tenderness permits, the inunction of hot camphor liniment is of especial value. If the inflammatory symptoms are severe, leeches, dry or wet cups, give a relief which is well worth the trouble of applying these old-fashioned but effective remedies. Counterirritation is objectionable in that the patients have to lie upon the blistered surface. After a good deal of experience with them, the writer is emphatic in his objection to this remedy in every form in such cases. Wet or dry heat in any shape in which it can be conveniently applied gives great relief. Mustard poultices



are useful, or the application of a paste made by stirring dry mustard powder into boiling molasses. The mustard keeps this application warm, while the molasses prevents its burning more than is desirable. When the tenderness permits, massage is of especial value. Acupuncture has also proved useful. The injection of sterilized water into the affected muscles is sometimes remarkably effective. But the best local application in the writer's experience is massage with some hot, thin animal oil, like cod-liver oil or goose grease, the operator's hands being connected with the positive pole of a faradic battery, the current being turned down below the point that would be disagreeable to the patient, much less one that would be painful to him. Electric massage of this sort can be continued five minutes at the first *seance*, being gradually increased to half an hour, and repeated once a day. In chronic as well as the declining stages of acute forms it is probably the most effective measure known to medical science. The oil here probably acts also as a local nutritive. This electric oleo massage is applicable to all forms of myalgia. In many cases where the local nutrition is evidently below par, it is wise to cover the affected parts with flannel saturated with an animal oil, this to be covered with oiled silk, so as to keep up a continuous oil application to the part and allow continuous absorption throughout the whole twenty-four hours.

#### *Ammonium Chloride a Valuable Remedy*

The most effective internal remedy for acute forms of myalgia, in the writer's experience, is ammonium chloride. This he has for many years been in the habit of administering in doses of twenty to thirty grains, three times a day, well-diluted; and he has yet to meet any acute case which has failed to be effectually relieved within forty-eight hours. This has proved more effective than the salicylates or any of the "coal tars."

The "sal ammoniac" should be given in one full glass of water, or preferably in a pint, to avoid irritating the stomach. If the stomach shows much irritability it is better

to dissolve the twenty-four-hour dose in a pitcher of water, and let the patient use it as his beverage through the day, only seeing that the whole quantity is consumed in the twenty-four hours. This large amount of water is an advantage, as it aids in flushing the eliminants of the toxic products of the disease, and possibly those which gave rise to the disease in the first place.

The bowels must, of course, be kept clear from the first and throughout the course of the malady.

#### *The Subacute and Chronic Forms*

Subacute forms of myalgia are markedly benefited by macrotin. Of this remedy, to adults a grain may be administered at a dose, and this may be repeated every one to three hours, until gastric disturbance indicates the limit of useful action, when the dose should be somewhat decreased so as to be kept below this point.

Chronic forms require, first, regulation of the digestion. The bowels must be kept so clear that fecal absorption is an impossibility. The urine should be examined, and if the elimination by this channel is deficient in any manner, the appropriate remedy should be given to bring it up. If the solids are deficient, colchicine is quite effective; 1-134 grain may be administered three or four times a day, or two to four times this dose at bedtime, just enough to insure a full alvine dejection the following morning.

Myalgia is common in persons who drink too much water, especially ice-water, or similar cold beverages. The excessive sweating seems to render the individual more than usually liable to it. Here, the bowels must be regulated, because the excessive use of water is often due to fecal toxemia. The skin should be hardened by the application of cold water, or salt baths, or rubbing. Pharyngitis is a common cause of this trouble; in fact in every case the patient should be treated rather than the disease.

In the study of the causation of myalgia, close investigation may lead, and certainly will lead a painstaking physician, over a wide field, too wide to be embraced in an

article like this. It may be admitted that in all chronic cases there are some structural lesions of the affected part, taking the form of connective hyperplasia and muscular degeneration, with adhesions limiting the free movement of the parts affected.

#### *Electrical and Absorbent Treatment*

Electrical massage is certainly of benefit in this condition, and may be aided by the application of absorbent remedies. Possibly the best of these is the iodide of arsenic, which may be given in doses of 1-67 grain three times a day, and continued for months, unless the supervention of toxic arsenic symptoms indicates the wisdom of discontinuing it for a time.

In other cases the vegetable resolvents may with propriety be substituted, especially stillingin, a remedy that has won some repute in the popular circles as a remedy in chronic forms of myalgia.

Of stillingin the average adult dose may be placed at perhaps 1 grain four times a day, although this may be largely increased. It is usually best to give such remedies with abundance of water, that the effete materials loosened by the remedy may be promptly carried out of the system.

When the corset has caused degeneration of the thoracic musculature, the patient should be enjoined to leave off this garment for constantly increasing periods of the day, finally only wearing it when going for outdoor exercise, that is, shopping or other phases or conditions requiring the employment of this garment. For real exercise, such as tennis and golf, the corset must be laid aside. If the electrical massage is properly employed, it will not be very long before the patient realizes the true nature and cause of the malady, and the effectiveness of the means employed to cure it. Afterward there will be much less difficulty in inducing an observance of this rule.

Since oxaluria is present in a proportion of the cases, as of the causes which lead to this malady, it should be remedied and its causes avoided. As a rule sugar is injurious in any but the smallest amount. The excessive use of meats and other nitrogenous

foods must, as a matter of course, be forbidden.

#### *Treat Occupational Causes*

When myalgia is evidently caused by some peculiarity of the occupation, as in some of the cases mentioned, this should be impressed upon the patient's mind, and he should be urged to find some other occupation, which would allow the affected muscles to be at rest. In the case of the morocco dresser mentioned, relief followed when he was simply directed to throw the skins up over the left shoulder instead of the right. But within a year the same malady developed upon the left side, and he had to seek another occupation.

Sulphur has won considerable repute in the treatment of these cases, its value being probably due to its effect upon the bowels. Guaiacum is also an old standby, and this probably acts by increasing the excretion of the solid constituents of the urine. These remedies have heretofore been used empirically. The time has come, however, when they must be restudied.

Phytolaccin has been found a useful remedy for myalgias occurring in fat people. It probably acts by favoring the absorption of fat, which otherwise hinders the muscles, overloading their fibers and hampering their movements. Phytolaccin may be given in such cases in doses of one grain three or four times a day. It must be remembered that the effects of this remedy are exceedingly slow in making their appearance, and perhaps it may be only after the patient has taken phytolaccin for two to three months or more that the effects are manifested. The fat may then commence to run off quite suddenly and so rapidly as to occasion alarm on the part of the physician as well as of the patient. If this occurs the doses should be lessened or discontinued, the effect being kept up, however, by other remedies acting more mildly, especially stillingin.

#### *Treating an Acute Attack*

Osler says that an acute attack may be cut short by a Turkish bath. He has found galvanism quite effective also, and

nux vomica in large doses sometimes beneficial.

Wood and Fitz advise, where the muscular contraction is marked, to inject atropine, gr. 1-100, into the affected muscles.

Brunton treated acute cases with full doses of gelseminine, which promptly relieved the pain and subdued the acute symptoms. This remedy should be injected into the affected muscles in acute forms, in doses of gr. 1-50, repeated as may be necessary. The remedy must be stopped whenever drooping of the eyelids shows the beginning of toxic action. Otherwise it is a very safe remedy indeed, because it opens up the elimination so widely that it rapidly passes out of the system, carrying with it many impurities which doubtless contribute to the production of the symptoms. Brunton also advises veratrine ointment to be applied externally; but this active remedy had better be used internally, if at all, as its absorption, administration and action can be much better controlled thereby. He found xanthoxylin a useful remedy, given internally and applied locally. If used at all, one grain may be given and repeated every one to two hours, until evidences of its action are manifested. It is not a very powerful remedy, is somewhat slow in action, and is better suited for chronic cases.

Senator advocated highly the faradic brush.

Burggraeve, the father of dosimetry, advocated for the muscular pains due to fatigue, baths, poultices and embrocations. When a rheumatic element was really present, he applied iodine locally and gave internally aconitine and veratrine if the case were acute, sodium arsenate or salicylate if chronic. For leg cramps followed by paralysis he sug-

gested strychnine, hyoscyamine and cicutine, a granule of each every half hour; with castor oil, vapor-baths and calcium sulphide, gr. 1-6 eight times daily. The dependence of the affection upon lead should not be forgotten.

We are unable to find that more recent writers have added anything of value to this list in the way of drug treatment. Certainly, however, we must not overlook the application of hot air, as this has proved of exceeding value in all the forms of this disease in which it is applicable. Acute cases are quickly relieved by it, as they are by a Turkish bath, or by a full sweating dose of pilocarpine administered hypodermatically.

Chronic forms are also benefited by it, when other appropriate treatment is instituted.

#### *Proper Cathartics to Use*

The saline cathartics are not so well suited in this disease as some such evacuant as cascara or sulphur. In fact the continuous administration of saline laxatives should be discountenanced in patients subject to this malady. In the acute forms, when the suffering is great and the necessity for prompt relief is manifest, a tablet of hyoscine, morphine and cactin may be injected into the affected muscles, with confident expectation of prompt and permanent relief. However, the cases are few in which such treatment is necessary, excepting in those acute forms which follow exposure; or sudden and violent exertion, in men of sedentary lives who were strong and muscular about twenty years ago and have forgotten that muscles do not remain in condition when they are not kept up by proper exercise.

**M**ARCH. This is one of the peculiarly dangerous months to speculate in stocks in. The others are July, January, September, April, November, May, October, June, December, August, and February.—Mark Twain.

# LET US HAVE LIVE ISSUES

Some of the problems with which the active general practitioner has to deal. An appeal for their fuller and more frank discussion, for a united and progressive profession, working for our mutual interests

By G. F. MESSER, M. D., Beaver Dam, Wisconsin

WHEN perusing the average weekly newspaper in the average small town in any part of the country reasonably near a large city, we see only too often a full quarter-page advertisement, with a number of paid "reading notices," of the traveling charlatan. In our town we have only four of these gentry making regular visits, once each month.

They should be compelled to register locally in the county and under very stringent supervision of the State Board of Health; but are they? Local physicians see these men getting ten- to fifteen-dollar fees from a class made up of rounders, many of them dead-beats; and yet these fellows make no "kick," no matter what the traveling faker may charge. But what a howl arises when they are charged a decent fee and made to pay it by the local physician!

## *Too Much "Back-Sticking"*

These men, and the everlasting *sub rosa* "back-sticking" of one another professionally, by all kinds of innuendos, shrugs, knowing grunts, winks or openly slanderous expressions of a brother doctor beget only too often a disrespect by the laity for the entire local medical talent.

How often have we all heard laborious platitudes and lofty sentiments expressed in our medical societies by some more or less distinguished medical man, while in his home town the same righteous defender of the code of ethics (that is more observed in the breach than in the keeping) will not associate with, speak to, nor counsel with any or many of his brother physicians. Such disgusting tactics, which the observant layman is quick to observe, belittle and lower the popular respect for the local members of the profession so that if the

layman has anything the matter with him, the newspaper "ads" of the great "horn-blowers" catch his eye first, then his money, while if he owes the local physician, the latter must wait for his money, too often till Gabriel blows his horn.

I contend that instead of listening to so many learned (?) papers by our good Dr. Ahem and discussing the virtues of all kinds of new and untried remedies, we should devote some of our time to manly, straightforward business talks, and the comparison of observations regarding the best ways to get in the money on our books, so that we can do our duty to ourselves and to our families. Let us stand together and refuse to attend "dead-beats" until they settle up, and not be afraid that we shall lose business by so doing.

A man who *will not* pay is not entitled to any consideration; a man who *can not*, but *will when he can*, is.

We ought to be a bit practical and stand out firmly for our just dues from the public. We ought to make traveling fakers impossible by our united influence with councils, aldermen and legislatures.

I do not wish to be understood as underestimating the value of the discussion of good scientific papers, clinical work and all the usual proper routine that makes for our enlightenment. Far from it. A good hammer-and-tongs discussion, case-reports and all that, are good and proper in their place.

But I do say, too, that too much dry-rot has crept into professional ranks, too much fetish worship, too much of the spirit of not believing, or advocating anything until the too-often self-constituted "authorities" have spoken. The average doctor only croaks, "Hear! Hear!" or "Me, too!"—*ad nauseam*.

I would also pay my respects to the musty lore too often copied bodily from books and thrust upon the long-suffering and patient-spirited profession; as "an original paper," forsooth!

### *Doctors Should be a Force*

Get together, Brethren! Don't be scolds nor molly-coddles, but assert yourselves. Wake up, fight for your rights in all directions. Be a positive force, not a mere negative storehouse of impractical goodness and inutility. Ours is a life of sacrifice and service, but we also possess rights that we must vigorously defend.

A column in the local paper of the *right kind*, to keep public attention upon the local profession and cause respect for us and our efforts, is right and proper, code or no code.

I dare say that the average doctor is too much bluffed and too reticent to be aggressive, because he will cause the bricks of some fanatical devotee of the "Code of Ethics" to be hurled at him. It has made too many cravens and cowards and not enough aggressive, independent, broad-minded thinkers among us. Medical history teems with mud-slinging and brick-throwing, figuratively speaking. We want to administer too much Code-hemlock and not practice enough of the stick-together, fraternal and proper use of such homely and practical things as how best to elevate the respect of the laity for the profession.

Make a man pay you and he will respect you. When you have his money and good will, and have satisfied him that you "make good," he will be an aggressive force, not only for you but for the profession at large.

When we get the proper rewards for our labor, we can better devote ourselves to new achievements, and can then afford to be less afraid that somebody else will get the business we are after, and less inclined to dislike him for it and speak and work evil against him.

A lot of the "codeists" need the Declaration of Independence read to them, not that they will like it, perhaps, but because they need it and it will do them good.

Another thing that makes for disrespect of the country or small-town doctor, is the altogether too frequent sending away for a specialist or surgeon, or sending the patients to them to such a large number that both the specialist or surgeon and the laity will, and *to my certain knowledge do, hold a local practitioner in contempt*. I've heard enough of such talks to know *it is true*.

It means for the average man to wake up, take notice, "make good," and fight this growing sentiment, for such it has, without doubt, gotten to be. We must combat the too-grasping specialist and hold *our own*, and *reeducate* the laity to a new or renewed faith in us.

Societies are all right in their place, but because a man does not choose to let everybody else construe the code for him does not stamp such a one as an outcast, yet that is just what does happen to any independent thinker and doer. Societies do not make brains for a man, nor never did, nor does the "rule or ruin" spirit strengthen respect for each other among ourselves.

We have a lot of human nature and ingrained selfishness in us as a race, and studying medicine does not eradicate all such impulses, nor is the arrogant spirit of complacency or self-sufficiency of belonging to a society a guarantee of our fitness, either moral or legal. There needs to be a lot of "home mission" work done among us before we can get over "marking time" in our tracks, before "marching on."

### *A Spirit of Individuality Needed*

I believe in everything, no matter what, that tends toward our individual and collective benefit, but there should be a shaking up of dry bones and a spirit of aggressive individuality, as well as a collective effort toward higher things. We must get out of the rut, rub off the rust and shake out the indifference that too often shows itself, and laugh these things out of our societies.

Too often we gloss over many puerile papers and flatter the reader of a common-

place compilation of doubtful merit, which commonplaceness in its "too muchness" kills interest in a society.

Let's join hands, Brothers, on live issues, and seek to be of independent spirit, yet of broad toleration and general helpfulness. We have seen too much smouldering of

professional jealousies. Bury the hatchet! So completely fill your time with practical, helpful thoughts, studies and deeds that there will be no time or room in us for these manifestations. I have seen too much of it in my experience. It has little or no place or time in our professional or private lives.

## THE THERAPEUTICS OF THE FUTURE

Immunizing medication the foundation of rational therapeutics:  
A brief outline of the "new physiology," which serves as a basis  
for the theory of Sajous, concerning the treatment of disease

By ADOLF G. VOGELER, Ph. G., Chicago, Illinois

IS the practice of medicine to be revolutionized? Are we upon the eve of one of the most remarkable and far-reaching discoveries affecting the future well-being of the entire human race? What about these new speculations of that man Sajous, who boldly proclaims himself to have wrested from envious nature its jealously guarded secrets of the mechanism of life and disease of the animal body? Surely it seems to behoove earnest seekers after truth in the medical profession to examine carefully into these new doctrines, since the spread of operative enthusiasm in the wake of a hopeless therapeutic nihilism is witness to the utter bankruptcy of the historic empiricism ironically called the "science of medicine." Thus it may be profitable to take a hurried glance over the latest volume on "The Internal Secretions" recently issued by Dr. C. R. de M. Sajous, as summarized by his coadjutor on *The Monthly Cyclopedia of Practical Medicine*, Dr. J. Madison Taylor.

### *The Peculiar Functions of the Pituitary*

There is hidden in the very middle of the skull, out of all harm's way, a wee little glandular body, known to anatomists as the pituitary body, but hitherto believed to be void of all physiologic value. Now, if Sajous's claims are borne out by further investigations, then this organ not only has a twofold function, according to its

anatomic and etiologic divisions, but it is the controlling and vitalizing center of the organism, governing all vegetative functions and hence most appropriately designated by the learned investigator the "somatic brain." Through the spinal cord this pituitary body controls both the adrenals and the thyroid gland, and under the directive influence of this trinity of interrelated ductless glands, and in intimate connection with the pancreatic gland as well as the supremely important leucocytes, the foremost life-processes as well as defensive activities are carried on. This broadly the fundamental idea. But now more as to detail.

To begin with, the *anterior* pituitary body is a "sensing", or testing, organ. It contains a tissue analogous to the olfactory area of the nose, and just as the latter detects any deleterious substances in the air inhaled, so the former "senses" in the blood-current the presence of abnormal elements—toxin, poison, drug, etc.—it becomes excited, and instantly it communicates this fact to the *posterior* pituitary body, through connecting nerve-fibers. (Why may we not, for the sake of brevity, coin the new terms "antehypophysis" and "posthypophysis?" They will be employed experimentally in the remainder of this article, and are recommended to the reader for adoption.) This "test-organ" is said to be demonstrable in all animals down even to

the mollusks, serving the latter for testing the purity of the water. Here this organ is known as the osphradium, i. e., "smell-organ."

*The Relation of the Posterior Pituitary to the Thyroid*

Now, the posthypophysis (posterior pituitary lobe) contains a nucleus of cells, and this center is directly connected with the adrenals by way of the bulb, cord, and sympathetic and splanchnic nerves. And thus an irritation of the anterior test-organ induces increased activity of the adrenals. But more. The posterior lobe stands in direct communication with the thyroid gland also, and this organ is similarly stimulated by the same impulse. Moreover, as a consequence of this excitation there occurs an increased production of the thyroid secretion, the specific object of which in turn also is to stimulate the adrenals by way of the posthypophysis (posterior pituitary lobe). At the same time the thyroid secretes more abundantly a ferment known as thyroidase. In order to get a clear understanding of Sajous' position a consideration *seriatim* of several factors is desirable.

Some ancient philosopher conceived the notion that the pineal gland is the seat of the soul, but we now well know it to be only a vestigial organ, the remnant of a badly degenerated primitive eye. The modern belief, however, that the hypophysis likewise is vestigial, is far from the truth, for this organ is of the most fundamental importance in the animal economy. As a matter of fact, the cerebral hemispheres of an animal may be removed without detriment to the vital functions, but everything ends with the removal of the pituitary body. Thus this latter organ may more justly be entitled to the appellation of "seat of the soul."

The adrenals secrete an oxygenized ferment designated as adrenoxidase, and this is identical with the oxygenizing body in the blood, heretofore known as oxidase. It constitutes 94 percent—i. e., the albuminous portion—of the hemoglobin molecule.

Adrenoxidase is the element in the blood which absorbs and binds the inhaled oxygen in the lungs, and this explains the fundamental but hitherto mysterious fact of animal life of the higher orders. The erythrocytes thus acting *quasi* as pack-mules convey in the blood-stream their loosely bound oxygen into every tissue, every cell of the body, originating chemical activities and corresponding metabolic processes, and so give us that "dynamic element of life" postulated by Herbert Spencer as necessary to account for the vital phenomena. Likewise does this elucidate the fact of cell-respiration. By virtue of its ubiquitousness, being present in every tissue without exception, no less than of its supreme importance in the phenomena of life, adrenoxidase might well be called the physical soul of the body.

*Thyroidin, Thyroidase, Opsonin*

The function of the thyroidin of the thyroid secretion was seen to be to stimulate the adrenals, the result of which, in turn, is an increased output of adrenoxidase, thus enhancing the oxidizing capacity of the blood and all the other vital processes. Thyroidase, the other secretion of the thyroid, on the other hand, is identical with the opsonin of Wright, that mysterious substance which renders bacteria vulnerable to the attack of phagocytic leucocytes.

Trypsin, the ferment given off by the pancreas, is found in the blood-plasma as well as in the phagocytes, and its function is to disintegrate and transmute any bacteria, toxins and other noxious principles endangering the organism. Excess of adrenoxidase in the blood stimulates the pancreas to the production of more trypsin.

There remain to be considered the leucocytes. These contain numerous enzymes and through these they are able to destroy whatever bacteria they may devour—"engulf," thus protecting the body from invasion. But this rôle of scavengers is only incidental.

The leucocytes we term phagocytes (constituting about 70 percent of the white corpuscles of the blood) in reality are the actual

builders of the body, and it is they who seem to create life by changing "dead" matter into "living" substance. For these little amebic cells take into themselves the partly digested food-stuffs in the intestines as well as those present in the body-fluids, and by virtue of their inherent ferments, or enzymes, and in the presence of the oxygen-bearing adrenoxidase, recombine the elements of this "dead" matter into minutest grains in such manner and proportions that now they are endowed with the properties of life. Then they betake themselves to the "four corners" of their organic cosmos and there again, with the aid of the ever-present oxidizing adrenal ferment, they deposit their building material for the construction of new cells and the reconstruction of those cells that are fated to be without free locomotion and so cannot forage for themselves. Do we not see here already the prototype of social interdependence and the elements of altruism? It should be said that the white cells act as scavengers merely because they convert food-products, disease-germs, broken-down cells, toxins, poisons, and other heterogeneous matter in the blood-current, into tissue-cells.

For the term "antitoxin" Sajous substitutes the more accurately descriptive, but somewhat cumbersome, "autoantitoxin." This agency is analyzed into four component parts, namely, adrenoxidase, trypsin, thyroldase (opsonin), and a nucleoproteid phosphorized body derived from certain leucocytes. In this manner "antitoxin" is a collective term and represents products from four sources: adrenals, pancreas, thyroid, leucocytes. In their united activities they constitute the "autoantitoxin" of the organism.

The action of autoantitoxin is that of digestion, and if these substances are present in the circulation in over-excess, we may witness hemolysis—the disappearance of red blood-cells themselves. Moreover, up to a given point the activity of a ferment is augmented by elevation of temperature. Here comes the explanation of the *modus operandi* of the defensive power of the animal organism.

When the organ is invaded, the pituitary body sounds the alarm, the thyroid and the adrenals increase their output, the augmented adrenoxidase in the current stimulates the pancreas, causes the multiplication of leucocytes, and the latter yield more of the nucleoproteid granulations. Now the oxygen of the adrenoxidase oxidizes the phosphorus of the nucleoprotein, with a corresponding generation of heat. This increases the bacteriolytic and toxicolytic properties of the trypsin and other ferments, the condition of "fever" and internal activity continuing until the enemy has been vanquished.

But, now, supposing the several glands involved are in a pathologic or congenitally abnormal condition, or the leucocytes are below par. In that case, logically, the leucocytes, instead of digesting the invading bacteria and producing nutrient, tissue-forming granulations, they carry to every part of the body live and toxin-generating disease-germs.

Thus, in a nutshell, we have what seems like a rational explanation not alone of the leading fundamental vital processes but as well of how the organism protects and cures itself automatically. And now the application of the facts so briefly and roughly here passed in review:

#### *Rationale of Immunizing Treatment*

In the light of these speculations we readily can see the rationale of present-day immunizing treatments—vaccines, Wright's inoculations, antitoxins, and so forth—but this newer knowledge must needs also lay the foundation for a better understanding of disease-processes and more so for a rational and really scientific mode of medical practice.

It is clear that stimulating or depressing the ductless glands in question must be the conscious aim of the therapist, and already it seems to be established that some of our most potent and reliable medicaments act in this very way, among these iodine and mercury, for example. Sajous claims to have definitely proven by means of the remedies in constant use among physicians



that the protective mechanism can be activated sufficiently to protect the patient, also that the animal sera act in no way different from the drugs mentioned, while the latter can be more certainly controlled by the physician.

Hence the fundamental principle announced by Sajous is that "immunizing medication is the foundation of rational therapeutics." He believes to have laid open the secret of the *vis medicatrix naturæ* as well as to have shown how to make this natural force more effective. Not only is Osler wrong in declaring pneumonia a

self-limited disease but he submits evidence that this and all other scourges of the human family can certainly be checked by remedies selected in conformity with his own teachings.

And in concluding his review of Dr. Sajous's doctrines, Dr. Taylor says: "Those who, like the writer, have availed themselves of Sajous's teachings in their daily work, have been able daily to appreciate the strength of his position, the power of the weapon or key he has placed in their hands, and the renewed confidence he thus inspires in practical medicine."

## THE CURE OF PNEUMONIA

Describing a method of treating this disease  
which has given remarkable results in a large  
number of cases. With an editorial comment

By G. L. LACKEY, M. D., Marshall, Missouri

THE assertion that pneumonia can be cured is generally met by a storm of protests, in which the names of Osler, Niemeyer, Flint and others are quoted as sustaining the contention that nothing can be done except to support the patient until the crisis is passed. Nevertheless pneumonia *can* be cured, and almost every patient who is seen early can be saved—there is no need of the frightful mortality of 40 percent under the "expectant" plan of treatment; and strange to say, the death-rate is on the increase every year in spite of the wonderful advancement in the medical sciences.

### *Recoveries—One Hundred Percent!*

For many years at Sweet Springs, Mo., I did a large practice; in one month (February) I treated 14 cases of pneumonia, and during that particular year I handled 96—with 96 recoveries! Many other years gave nearly as many cases, and almost as good results. Now when I note the number of deaths throughout the country it seems to me I must have been doing something

"worth while" in the way of treatment—something perhaps worthy of space for description in THE AMERICAN JOURNAL OF CLINICAL MEDICINE; which by the way recently contained the statement that in 966 cases of pneumonia in the Philadelphia Hospital there were less than 400 recoveries! Another report lately published was that of 7 adults in one family in New York City all died within four weeks. Why should such things be? Is it too much "advancement"—too much medicine, too little appreciation of drug-value, or what? For twenty years I have been treating this disease—from the sea-level to the altitude of Cripple Creek, Colo. (at the latter place the mortality is said to be uniformly 100 percent), but 5 of my patients recovered); and nowhere have I had a mortality above 5 percent, counting the aged, the drunkards and all. Why?

I am familiar with the pathology of both forms of pneumonia; and I know why and how it kills. Every man to be successful in the management of this disease must know these things thoroughly; for only by

combating the tendency to death, by overcoming the peculiar pathologic conditions which may be present at any particular "stage," can a cure be effected.

#### *Pneumonia Can be Aborted*

I have used the word "stage" in its broadest sense, because I am prepared to prove, so far as pneumonia is concerned, that it is not "characterized" by two, three or four "stages." Properly treated, 40 percent of all cases of pneumonia can be aborted within the first forty-eight hours; 65 percent of the remainder can be cut short; and 95 percent of patients between five and sixty years can be saved. For medicine, skilfully employed, in this disease has wonderful powers. Those who have read *THE ALKALOIDAL CLINIC* for years must be convinced of this. The only question is: How shall our remedies be used to save pneumonia-cases? I purpose to tell, as nearly as I can in writing, for the benefit of my professional brothers: for I have nothing to sell, nothing to advertise, nor any secret to die with me. Moreover (and here, I fear, the interest of many readers will fail), I have no *specific*. Yet the application of well-known drugs must be "specific" to secure ideal results; and this application must be along general, broad lines; the question so often asked, "Doctor, how do you treat pneumonia?" cannot be answered save in the giving of certain directions how to overcome certain conditions. But there are certain "negatives" just as important as the "positives" in these directions; especially these: Never use any coal-tar preparation; never prescribe any drug which will depress; never order arterial sedatives; never advise a very cold or extremely hot bath; never permit application of an ice-pack.

#### *First—Sustain the Vital Forces*

The foremost indication, first and last, is to *sustain the vital forces*. Give the patient as nearly as possible a heart of double contractile power. Keep aroused all of the secretions and excretions, thereby assisting in the maintenance of the vascular equilibrium.

So far as drugs are concerned, those absolutely essential can be obtained in any country drugstore; as the readers of this journal are well acquainted with the alkaloidal equivalent of these agents I shall give my prescriptions as they would probably be dispensed by the average country doctor not thoroughly familiar with all of the advances advocated by Drs. Abbott, Waugh and others who are doing so much for modern therapy. But it must be borne in mind constantly that it is upon the proper *combination* of our remedies that success depends, together with their timely administration, with local application and general management of the sickroom. In the study of the scientific combination of drugs we have an attractive, and everlasting, task. (Thus for a long time we have known of the virtues of hyosine, of morphine and of cactus; but the powers of their combination were never guessed until the attention of the surgical world was called to the wonderful anesthesia therewith obtainable, by Lanphear of St. Louis and Abbott of Chicago—something which will add to the greatness of a great surgeon already renowned and the credit of a manufacturer whose name stands as a synonym for accuracy and purity.) If in the combinations here proposed I am able to add a small mite to the general fund of medical knowledge I shall feel that my professional life has not been in vain—for whosoever saves a man from death by pneumonia deserves as much credit as one who saves by a timely appendectomy. And my ideal shall have been attained: to be able to prolong human life, to increase happiness, and to deserve the respect of the earnest doctor.

Before considering the treatment I want to answer the question: Does an attack of acute pneumonia ever effect a <sup>cure</sup> of pulmonary tuberculosis? Yes. I can give detailed report of four cases if desired.

#### *The Method of Treatment*

*For the Chill.*—Administer a hypodermic of morphine, 1-8 to 1-4 grain, according to the strength and age of the patient.

*For the Cough.*—As an expectorant some modification of the following will be useful: Salicylate of ammonium, 8.0 (drs. 2); spirit of peppermint, 8.0 drs. 2; syrup of white pine compound, 128.0 (ozs. 4).

Mix. Direct: One teaspoonful every two hours. The ammonia certainly does liquify the tenacious muco-pus, thereby facilitating both expectoration and absorption. It also acts as a diaphoretic and cardiac stimulant.

*For Nervousness and Weakness.*—To overcome the necessity of frequent hypodermics of morphine and of strychnine—so much praised by some—I prescribe: Infusion of digitalis, tincture of nux vomica, tincture strophanthus; of each a sufficient quantity to meet indications at the particular time these agents are needed. Or: Tincture of digitalis, 8.0 (drs. 2); tincture of nux vomica, 8.0 (drs. 2); tincture strophanthus, 4.0 (dr. 1); whisky, enough to make 500.0 (ozs. 16).

Mix. Direct: One tablespoonful every four hours, or half the quantity every two hours. This I regard as a most valuable combination, if used judiciously.

When compelled to resort to hypodermics I administer glonoin in doses of 1-250 grain, repeating as often as weakness of circulation demands. (When the patient reaches the point where this treatment is necessary the doctor must not leave for long—in the most serious cases he must “camp with” the patient for many hours.)

#### *Fever Not of Greatest Importance*

Just here I beg to differ with Dr. Wetherby of Middletown, Ky., who writes, “Of all sources of heart-weakness the fever is the most important.” There are many diseases in which the fever runs higher, at the same time the heart is very slightly affected, certainly not enough to demand a constant watch or constant stimulation. But in pneumonia the heart has to stand the double burden so suddenly thrust upon it: all the blood must pass through the lung, and since it can find oxygen in only one lung the heart is overtaxed to force it there. Not only is the affected lung full of blood, but the pulmonary artery contains a goodly

share, consequently the right heart itself *must* retain some after each systole. Therefore I have no use for aconite, veratrum or the tar preparations. A slow pulse is not necessarily a strong one, especially when that slow beat is the physiological effect of aconite or veratrum. If we are investigating nature's methods we should remember that nature is responding now to a pathologic condition, to absolute necessity—hence we find a “bounding” pulse. It should be bounding, and when we can increase the contractile force (not *diminish* the “bound”) by digitalis, strophanthus, nux vomica, glonoin and whisky, it certainly behooves us to do so.

*For the Bowels.*—At the same time we must flush out the primæ viæ and establish a vigorous eliminating process throughout the entire body; that at once will establish a vascular equilibrium, leaving small necessity for either aconite or digitalis. To do this I administer double doses of seidlitz powder, every hour and a half, and from 2 to 5 grains of calomel every two hours, combined, in capsules, with powdered rhubarb and bicarbonate of sodium and—never stop until the intestines are thoroughly washed out.

After repeated catharsis I order the following—to be continued until the patient is out of danger—varying the dosage according to circumstances: Opium, powdered, 0.4 (grs. 6); ipecac, 0.2 (grs. 3); calomel, 0.2 (grs. 3).

Mix and make into 12 capsules. Direct: One capsule every four hours.

Here the opium insures rest, if not sleep; and it helps sustain the vital forces as no other drug can. The ipecac stimulates, both by contact and absorption, all the gastric and intestinal follicles and the alimentary appendages; also acting as a diuretic and diaphoretic. The calomel is not only one of the best antiseptics in the world but aids the ipecac in all of its action. If this combination is pushed to the verge of producing ptialism with the stimulant above noted the patient will not die of pneumonia while taking it—unless extremely aged or fatally weakened by alcoholism.

The so-called "Galbraith treatment" by use of large doses of quinine is nothing new; this plan has been in common practice in the "malarious" regions of the West since the country was first settled. Unlike Dr. Wetherby I am a strong believer in its usefulness—and at practically every "stage" of this disease. After the initial hypodermic, followed by the free purgation, I nearly always order a decided dose of one-half to one Gram (8 to 15 grains) and continue it in 5-grain doses every three hours until intense cinchonism is produced; and then follow with the stimulant liquid and the opium-calomel capsule. A little opium may, if desired, be combined with the quinine.

"I object to the calomel," somebody exclaims. Of course you do; but—try it. "I don't want to give the quinine," another declares, "it is so disagreeable, etc., etc." Of course you do not; but—try it. "I don't believe in expectorant mixtures," still another contends. Of course you do not; but—try it!

No explicit directions can be given how to use these various combinations—each individual requires some modification; but if this general plan be followed, mixed with some brains, *pneumonia can be cured*; or at least nearly every patient can be saved.

#### *An Illustrative Case*

Mr. G. W. Smith, still living, at the age of 74 years, of tuberculous family. At 60 he was taken violently ill, at 6 p.m. of a winter's day. At 6:30 a. m. he was in the most severe rigor I have ever seen. A hypodermic injection of morphine, gr. 1-4, strychnine, gr. 1-40, was given, but did not stop the chill for forty minutes. Respiration 60, pulse 140, temperature 104° F. Later two other doctors saw him and decided that death was certain. His tongue soon was dry and swollen, skin hot and dry (not a drop of moisture appeared either upon body or tongue for three days, and urine was so scanty that it was passed only once each eighteen hours), bowels motionless and flat, left lung solid from apex to base. I remained with this man eight days and nights and *saw him every hour*.

After the hypodermic I gave him 15 grains of quinine, followed by 5 grains each of calomel, rhubarb and bicarbonate of sodium. Next I ordered the three "standard" prescriptions outlined above, and from that time on acted both as doctor and nurse. The medicines were given regularly—with such variations as the changing conditions demanded. In addition, I gave him during the first thirty-six hours more than 6 Grams (*one hundred grains*) of calomel! He also took three full bottles of citrate of magnesia and several doses of 1-4 grain of podophyllin every two hours before his bowels moved freely—beside six high rectal injections of warm soapsuds! Heroic? Yes; but at the end of thirty-six hours a small passage from the upper bowl was secured and he felt a little better, though his temperature was still 104° F., pulse 150 and respirations 60, with constant cough and little "brick-dust" expectoration. Two hours after, after more soapsuds enema, he had a free bowel-movement and the temperature fell to 103° F.

For a few hours he seemed to improve, but the tongue still remained dry and there was muttering delirium. The calomel and quinine were discontinued and the other mixtures given. (At the fourteenth hour his temperature was 105.7° F., heart irregular and failing to fill the radial artery—yet it was here that I began giving the huge doses of calomel and the podophyllin.) After the floodgates were opened there dawned a day of hope, in spite of the extreme prostration which might be expected, but which never came. With copious bowel-movement and free taking of water his tongue moistened, he began to eat, and improvement was marked. Most of the calomel passed through his intestinal canal unchanged, and without strictly purging him. The lung cleared, expectoration became free and easy, and return to health was all too speedy for the doctor's bank account. In two months he was in better health than ever before and today he is a hale and hearty old man.

From the above the reader must infer that I have no maximum dose; that I am

not afraid of calomel; that I am sure my medication saved a life; that I treat conditions—not disease; and that I believe in giving medicine to produce effects.

[Here is a method of treating pneumonia which is radically different from the one which we advocate and the one in which so many of the readers of *CLINICAL MEDICINE* have the greatest faith. And yet it “works”—and we have no quarrel with methods of treatment that promise to add in the slightest to the doctor’s success. We do not of course agree at all with the doctor’s objections to arterial sedatives—and for the same reason that he favors the method which he outlines in this article: the arterial relaxants, aconitine and veratrine (in the doses in which we recommend them they are not cardiac depressants) combined with digitalin and strychnine arsenate in proper proportion in proper cases, arrest the course of pneumonia and cure it. There is a “great crowd of witnesses” to this fact; thousands of physicians have adopted this method of treatment; tens of thousands of patients have been cured through it; and few physicians are likely to “switch” from the tried and found-successful to the untried and enigmatical.

Possibly we are not so far apart on some phases of the treatment, however. Dr. Lackey places great emphasis upon elimination. So do we. Like him we believe in keeping the bowels thoroughly flushed out, though our methods are somewhat milder and our treatment throughout less “heroic.” We add the sulphocarbolates to prevent autotoxemia from bowel absorption and to minimize the possibility of gas formation. Dr. Lackey stimulates with digitalis and nux vomica, we use digitalin and strychnine arsenate. His heroic quinine treatment has something of the immunizing effect of our veratrine—though the latter is far more pleasant to take, and (pardon us, Doctor,) more satisfactory in its results. Try and see!

If we were to try the doctor’s method, we should put aside the galenics and use the active principles in their stead—digitalin, strychnine, strophanthin, etc. But we (like all the “family”) are growing more and more enthusiastic with the dosimetric method with which we are all familiar. It is certain in its results, pleasant alike to doctor and patient—and it aborts when cases are seen early, curing (we think) every curable case.—ED.]

## ALKALOIDAL THERAPY AND ITS ADVANTAGES

This paper, which discusses the objections to, and the advantages of alkaloidal therapeutics, was read before the Lawrence and Stone County Medical Society, December 3, 1907

By G. B. DORRELL, M. D., Republic, Missouri

President of the Southwest Missouri Medical Society

**W**E may safely assume that there is nothing which interests the average man or woman quite so much as matters medical. For every last one of us wants to live as long as he possibly can and in every possible way to avoid physical suffering and the diseases which conduce to this and to the shortening of life. Nevertheless it may surprise many to know that a remarkable movement has been progressing for the last

fifty years in medical circles, which bids fair to revolutionize the practice of medicine. Moreover, this movement has grown to remarkably large proportions without having as yet in any way come to the attention of the public. There has not yet appeared a line in regard to it, in any publication not designed especially for the medical profession. The reason for this is, that the movement has been carried on strictly

within the lines of that secretive clan. It has been a reform inside of the party, and the promoters have jealously confined it to the profession, withholding from all except physicians the privilege of subscribing to the publications treating of it, and refusing to sell the remedies employed in it to the public. For these reasons the progress of the movement has been comparatively slow.

### *Early Popularity of Homeopathy*

It may be remembered by some of our older members that the early popularity of homeopathy was due to its presentation to the public. In fact, many physicians adopted the homeopathic methods and remedies, not because they desired to do so, but because they were compelled to do so by the public demand. Many an old-school doctor became a homeopathist simply because his patients would have it, they having ascertained that there was a method of treating disease by safe and not unpalatable remedies. Whether these were as effective as the older forms is not to the point; the fact remains that it was this public demand which gave general vogue to homeopathy.

The promoters of the present movement, however, have shown themselves to be orthodox of the orthodox, going so far as to appeal to the subscribers of their medical journals that they shall not allow them to be seen in their waiting rooms where those outside of the profession may have the opportunity to see them. Nevertheless, despite these precautions, the method has spread until more than fifty thousand American physicians are using it to a greater or less extent; and if the matter once comes to the attention of the public it is possible that there may be such an interest aroused that the remainder will be compelled to fall in line and study and practise the new method or be forced into retirement.

### *What Alkaloidal Medication Is*

What is this method? At first sight it seems to be a simple matter, rather a question of drug selection than anything else. It is simply the substitution of the active

principles for the old-fashioned tinctures and extracts. As we say, this at first sight seems to be a trivial matter, simply the preference of a doctor for one form of a remedy over another; but in reality the matter goes very much deeper than this, and in fact constitutes a revolution in the practice of medicine.

The reason for this lies primarily in the uncertainty of the old-class preparations. The constituents of medicinal plants may be arranged under two groups, one consisting of such ingredients as have medicinal activity, that is, those that exert some influence upon the human body in the state of health or disease; the other, of inert substances, those that have no effect so far as known. Among the latter we group woody fiber, gum, sugar, pectin, etc., which, presented in the form of medicine, are simply so much "dirt" encumbering the true medicinal principles, increasing the dose, rendering it disagreeable, and more difficult of absorption.

The object of pharmacy has heretofore been to leave out as much as possible of this useless matter, so as to present the true medicinal principles of the plant in as clean a state as possible. For this reason the crude drugs, roots, bark, leaves, herbs, wood, etc., are reduced to powder, and water, alcohol, glycerin or other liquids are employed to extract the really valuable principles, thus largely eliminating the dross. The result is a series of preparations known as tinctures, extracts, etc. These preparations, however, contain besides the really useful principles others which are undesirable. For instance, tannic acid is almost always extracted along with the desirable elements. This is objectionable in that it often precipitates and renders the medicinal principles insoluble, hinders their absorption from the stomach, interferes with digestion, and altogether is an undesirable ingredient of these medicines.

### *Changes in Galenic Preparations*

Aside from the objections named, such preparations are liable to certain changes which go on constantly. The alcohol and

water of tinctures and fluid extracts evaporate, leaving the remedy in a more concentrated form and consequently stronger than when it was first made. On the other hand, molecular changes occur by which the active principles deteriorate, resulting in coloring matter and other worthless products, so that there is a continuous loss of the really valuable principles. This decomposition goes on in varying degrees under varying conditions, but it is of sufficient importance to have attracted the attention of pharmacists; so much so, in fact, that one very popular retail pharmacy in an Eastern city had the custom of annually taking all its liquid medicines and emptying them into the river, replacing everything on its shelves with fresh preparations, so that there was never a liquid in the place that was not less than one year of age. During this year's time the two processes mentioned, that of evaporation and of deterioration, went on apace, so that the actual medicinal strength of the preparation depended upon the degree to which each of these processes had proceeded. Its actual strength was, therefore, in all cases a question for experiment; and the physician might find that a remedy taken out of the same bottle was either stronger or weaker this month than it was the preceding one.

This, however, is only one of the objections to this class of medicines. Another is to be found in the varying chemical composition of the original plant. The medicinal value of plants depends upon the presence of certain chemical bodies, known as alkaloids, glucosides, etc. Most plants contain more than one of these bodies. Opium contains at least twenty-six. These are developed in varying proportions, as the plant grows under the varying conditions of soil, culture, sun, shade, moisture, dryness, coolness, heat, etc. It follows that every plant develops its active principles in quantity and in proportion to suit itself; that is, to suit its own needs and not those of the human being who possibly may require it for his ailments. The preparations made from these plants, therefore, vary. For instance, in opium the principal ingredient for

which it is generally used is morphine; but the quantity of morphine may vary from a maximum of 18 percent down to nothing at all. It will be seen that even if all the preparations from a plant-drug or a drug-plant are manufactured in exactly the same manner, no two of these will show exactly the same strength at the beginning, even before evaporation or deterioration has commenced.

#### *Antagonistic Principles in the Same Plant*

The various active principles often found associated in plants vary remarkably in their effects, and it is by no means unusual to find that the same plant contains principles which are exactly antagonistic in their action. For instance, that wonderful storehouse of remedies, opium, contains among its numerous active principles several such as morphine, codeine and narceine, which are sedatives, relieving pain and inducing sleep; others like thebaine and laudanine which act like strychnine, being powerfully stimulant and actually preventing sleep. This explains the occasional occurrence of cases wherein preparations of opium, given to relieve pain and induce sleep, have instead of that induced fatal convulsions. A case of this kind occurred in Denver, where a physician administered to his child paregoric for the purpose of easing pain, and it died of convulsions. The opium from which that paregoric happened to have been made evidently contained little or no morphine, but an excess of the strychnine-like principles.

Another striking example of this may be found in the jaborandi plant, a Brazilian remedy, introduced to the civilized world about thirty years ago. This contains two antagonistic principles, one of which increases the milk of the nursing mother, while another dries it up. Some extracts contain an excess of the first, in others the latter predominates; and the only way to know whether this drug will do good or harm is to try it on the patient. These are instances of a condition which exists quite frequently in plants, and many similar examples could be adduced were it necessary.

The result of this pleasing uncertainty as to what the medicine is going to do may be seen in the action of the physician. He visits the patient, thoughtfully prepares his prescription, tells the nurse how it should be administered, and in a few hours comes back to see "how his medicine has acted." Possibly it may have acted in the way he desired, and exactly to the degree he desired; but more frequently it has not done what he desired, and he must either increase or decrease the dose, add something else to the prescription or change it altogether. But in the meanwhile precious time has been lost, the disease has been making headway and may by this time be so firmly established in the patient's organism that, instead of being broken up, it must run its regular course, and the physician is reduced to the position of a rather impotent spectator.

This results in one of two undesirable things: either it makes the physician timid, uncertain and overcautious in his use of remedies, or it makes him a disbeliever in drugs altogether, and leads him to conclude that there is no special value in them.

He therefore switches off into the ranks of the specialists or concludes that his own best means of benefiting his patients lies in surgical operations or other mechanical measures. We assume that most of us would rather take a few doses of medicine than to have the knife applied; and unfortunately would not prefer a few bottles of rather inexpensive drugs to the exceedingly costly, tedious and not always effective measures which have in recent times to a greater or less extent replaced the use of drugs in the doctor's estimation.

Many expressions showing their disbelief in drugs may be quoted, and these from the mouths of the most eminent physicians in the profession. But it may be noted here that every one of these comes from the lips of physicians who have not employed the new method but have contented themselves with the old, imperfect, uncertain and constantly varying drugs which formed the mainstay of the profession until this new movement commenced. We find no such

expressions from the advocates of the new method.

### *Every Physician Has Adopted Some of the Alkaloids*

To a limited extent every physician has adopted some points of the new method, as for instance in the substitution of morphine for opium. Instead of relying upon the uncertain action of laudanum, which either may cause sleep and relieve pain or else cause convulsions and prevent sleep, the modern physician nowadays usually gives a proper dose of morphine, and thus secures the definite effects of that remedy without any question. So also with quinine—the older physicians gave their unfortunate patients one ounce or more of Peruvian bark. This huge dose was stirred into wine, whisky or other alcoholic medium and then administered. If the patient succeeded in retaining it on his stomach, the gastric juice gradually dissolved out the active principles from the mass of inert woody matter, etc., and the patient was relieved of his chills or whatever other affections he then suffered from. In the progress of time pharmacists succeeded in dissolving out the active principles from this mass and presented them in thirty grains of extract—a black, tarry mass, which, however, was far more palatable, or rather less unpalatable, than the 480 grains of powdered bark.

Pharmacy went on and found that six or seven different alkaloids were contained in the different Peruvian barks, and one of these, namely quinine, proved to be the best for most of the purposes for which the bark was used. We therefore succeeded in reducing the 480 grains of powdered bark to about 10 or 12 grains of quinine; and this comparatively small dose could be taken in pill, in capsule, or enveloped in a little tissue-paper, so as to avoid the bitter taste, while the digestive fluids had much less difficulty in appropriating it. This opened the way to new uses of this drug, which were not possible with the original bark.

The same is true of morphine. The modern physician can give it hypodermically, a thing which was impossible with the crude



opium preparations. In this way he can obtain, in a minute, relief from agonizing pains, whereas under the old method the patient would have to wait for a much longer period, until his absorptive apparatus had selected the morphine from the crude mass, dissolved, absorbed and assimilated it. This slow absorption necessarily required a much larger dose than sufficed to give relief when the naked alkaloid in solution was injected hypodermatically and promptly entered at one time the system, giving suddenly and powerfully the effect which secured relief.

#### *The Extension of the Principle*

The advocates of the new method, however, did not stop with morphine and quinine, but extended the same principle to the entire vegetable materia medica. There are many of these active principles found in the vegetable world, some of them so enveloped in extraneous matters as to render them of little or no value whatever, until they are thus extracted.

For instance, there is a certain group of plants which contain a glucoside known as arbutin. Now it happens that every one of the plants containing this drug has won some popular reputation as a means of relieving the painful affections of the bladder, such as men in the advance of years are subject to. But the arbutin is in every instance associated with an enormous amount of tannic acid, generally about thirty-five times more than there is of the arbutin. Arbutin in itself is not a very powerful remedy in small doses; in fact, in France it has been found advisable in some instances to give as much as 50 grains of arbutin at a single dose. To give this in the form of the crude drug would require, however, a quarter of a pound of tannic acid to accompany it, and this dose would undoubtedly kill a whale. This therefore renders the administration, in effective doses, of crude drugs bearing arbutin an impossibility; hence the drugs containing this have been looked upon simply as feeble remedies with a very slight influence for good. Nowadays, however, the arbutin is extracted from these plants and presented in a state of chemical purity, so that doses

of any size required may be given; and the result of this has been that arbutin proves to be one of the most useful remedies for bladder affections that have ever been discovered by man.

#### *The Number of Active Principles*

The number of these active principles which exist in the plant-world is unknown. As yet between one and two hundred of them have been studied to a greater or less extent, and are utilized by the advocates of this new system. It has been found that these pure active principles exert a uniform effect upon the functions of the human body; that is, the effect noted in one case from the administration of a certain dose will invariably be found in other cases to follow the administration of that same dose when the conditions are similar. The physician has therefore a firm base from which to make his first step. Instead of giving a drug timidly, and watching to see what its effect is going to be, ready to stop or modify on the moment, he can intervene promptly, boldly and effectively at the first opportunity. He is thus frequently able to break up a forming disease before it has been fixed in the system, and thereby save his patients a long and tedious illness. Instead of being merely a more or less benevolent spectator, he now resumes the position of the older physicians as an active participant; he takes command, and his intervention is potent for good; he knows what he is doing, which is a very good thing for the doctor and still more for the patient. He knows exactly what his medicine will do, so that there is no need to stop and experiment with each new case. Knowing this, it is up to him to study his case so that he will detect the opportunity to intervene with one of these certain and powerful medicaments, when the "indication" is presented; that is, when the symptoms detected by him in his study of the case show that any certain remedy will be effective in counteracting the disease and restoring health.

The use of these remedies therefore begets in the physician the habit of careful study of his case. It is not his part just to come in,

tell a good story, "jolly" his patient along, regulate the diet, look after the hygiene of the house, and leave the patient and his disease to fight it out. Instead of that he grows alert, keen in observing his case, prompt and effective in his intervention. His medicines do exactly what he wants them to do; in fact this is so much the case that physicians have actually complained that patients get well so quickly under the new system that they are scarcely able to make their living by charging the ordinary rate per visit! It has become an absolute necessity, therefore, for them to increase their fees—or rather to gauge these by the service done—instead of upon the number of times they see the patient. The latter, however, who is spared a painful and tedious illness and restored to his duties promptly can well afford to recognize this fact in remunerating his doctor.

The increased confidence the physician has in his own capacity is quickly recognized by his patients. The sick are apt to be wonderfully keen-sighted; and the physician who comes into the sickroom and shows in his countenance his perfect confidence in himself and his ability to manage the case, based upon a careful scrutiny of the symptoms and appreciation of the conditions presented and his knowledge of the powers of the drugs he is going to use, wins the confidence of the sick, who contentedly entrust themselves to the man whose command of the situation is shown in his countenance.

It is characteristic of the new method that those who have studied so far as to become fairly proficient in the use of these precise, highly differentiated therapeutic weapons, invariably prove to be believers in the possibility of breaking up or aborting disease at the outset and in the curability of maladies without the destructive processes of surgery; while those who have not investigated the new method or given it sufficient trial, generally proclaim that there is no treatment for a disease excepting the knife, that the profession is powerless in the treatment of such affections as pneumonia, gallstones, etc. Each of these evidently sees with his own eyes, and is frank in expressing his convic-

tions. When one man who has tried a method of treatment asserts that he can cure a disease, and another man who has refused to give it a trial asserts that he cannot cure the disease, we are quite willing to believe them both; but when the second man not only asserts that he cannot cure the disease but that the other man can not do so, even with the use of remedies and methods which the pessimist has never tried, we may be permitted to value cheaply the qualifications of the latter as a witness in such a matter.

*Every Man Wants to be Cured—and  
that Quickly*

We don't like to be sick. We would rather not die. If we do get sick, as we do occasionally, we would rather be cured quickly and easily than be compelled to lie in bed for a long time and at a great expense, with much suffering. We would rather have a doctor treat us who knows he can cure us, than one who says that he can do nothing except look on. We like the doctor who looks on us as a patient, rather than the one who looks on us as a case. We do not at all share the disappointment of the ultrascientist, in that he is unable to complete our case with a postmortem. When one man says there is no treatment for pneumonia, and another man says that he rarely allows a pneumonia patient to die and that many attacks which look to him like pneumonia are aborted in a day or so by his method of treatment, so that the victims are back at the office within a few days, little if any the worse for their experience, we feel like throwing in our chances with the latter. The men who have not learned to make any use whatever of drugs claim to be the most scientific; but if so, we would a great deal rather live unscientifically than die in order that our vital parts may ornament the museum of the medical college.

In Europe this new method is known as dosimetry, because the remedies employed under this system are presented in the form of granules, each of which contains exactly the same dose; and these being regulated by the metric standard, contain a centigram, milligram, or a decimilligram of the remi-

edy. The individual doses are exceedingly small, the dosage difficulty being met by dividing what would be a full dose for an average individual into, we will say, ten parts. Instead of giving the entire dose at once, which may be about right, too little or too much for that particular patient, one of these tenth-doses is administered every five to sixty minutes, according to the rapidity with which it is absorbed.

These little doses are repeated until the patient shows that precisely the desirable quantity of effect has been obtained; then the doses are either discontinued or given less frequently, so as to sustain the desirable effect. This does away completely with all dangers from overdoses which might injure the patient, or from underdoses which would fail to control the malady. The varying reaction of different patients against the medi-

cine is obviated. There is no trouble, there is no peril, in the use of the most active remedial agents under such a system.

In America the method has been known as alkalometry or alkalotherapy, because the principal remedies used are alkaloids; and while the same system of dosage is employed and the importance of accurate dosage is fully admitted, it seems better to adopt a name suggestive of the great importance of the use of active principles. However, the promoters of this method have been so anxious to avoid the imputation of creating a new medical heresy that they generally speak of the matter simply as "active principle medication," so that they cannot be called "alkaloidists," a word which might, in the minds of their medical brethren, suggest this as the creation of a new sect or school, like that of the homeopaths.

## ACUTE ANTERIOR POLIOMYELITIS

The story of an illustrative case and how it was treated, with suggestions concerning the management of this common disease of childhood

By EDWARD A. TRACY, M. D., Boston, Massachusetts

Orthopedic Surgeon to Mt. Sinai Hospital

THE article upon this subject in the January number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE is very important. From experience with active drug treatment in the more deadly congeneric disease—epidemic cerebrospinal meningitis—I believe the treatment you outlined will be found efficient. This experience, by the way, CLINICAL MEDICINE shall have later for publication.

As a matter of fact, it is unfortunate that acute anterior poliomyelitis is not early recognized by the general practitioner—not until months have passed, as a rule—and then, when infantile paralysis is pronounced, the late diagnosis is made—too late often to prevent deformity and weakness for life which could have been prevented.

The brief history of a case brought to me recently is illustrative as regards slackness in diagnosis. A child, eighteen months—a chubby fellow—was brought by the mother, who wanted to know what was the matter with him. Five weeks before he had fallen backwards off of a chair. He was put to bed, a doctor summoned, and for a week kept of his own accord quiet in bed. At first he was quite feverish. Gradually he began to use his limbs again, and as the doctor first called did not inform her as to the child's ailment, another was called. He suggested that a surgeon be called, and did not give the mother any more information than the first. Both of these gentlemen are able practitioners. The mother noticed that from the second week, when it

commenced to get active again, it dragged one leg, but considerable improvement in its ability to get around had taken place, before I saw the child, five weeks after its fall.

On stripping and examining the child I found no spine tenderness, no impairment of joint motions, nothing in fact but wasting of the right leg-muscle and absence of the right-knee-jerk. Hemorrhage into the cord caused by the fall could have caused the signs present. But I take it that the fall was coincident with or caused by the onset of the disease—acute anterior poliomyelitis. The fact that the disease was very prevalent in New York just previous to this strengthens this opinion.

I told the mother that the child had infantile paralysis, that irreparable injury was being done the child by allowing it to bear its weight on its weakened limb; that it should be kept in bed for at least nine months to prevent stretching of its weakened muscles and consequent deformity. Minute dosage of strychnine was prescribed, and the mother was instructed how to massage the limbs and give passive movements daily. She was told to keep on the lookout for any deformity, any difference in the posture of the weak limb or foot from that of the well limb, and if noticed, to send for me so that the foot or limb could be splinted in a normal position and thus deformity be prevented.

The advice given above is extremely important. It may be that the disease, when treated in the scientific manner suggested in the January number of this journal, may not have any tendency to the usual sequelæ,

familiar to all orthopedic surgeons, in fact familiar to most communities, in the cases of wasted and deformed limbs—pitiful cases indeed.

#### *These Cases Can be Prevented*

Now, these cases can for the most part be prevented—I mean the deformed and palsied lower limbs that result from acute anterior poliomyelitis can for the most part be prevented. Dr. Judson of New York has drawn the attention of the profession to the necessity of the recumbent treatment in this disease. The vast majority of palsies and deformities noted as occurring after an acute attack of this disease are in the lower limbs, though both upper and lower are originally affected. The reason of this, as Judson has pointed out, is the strain of weight bearing on the weakened muscles of the lower limbs which is permitted before they are sufficiently recovered to bear the strain. As a consequence the weakened muscles stretch, become permanently weakened, and the opponent muscles pull the parts to which they are attached into deformity. Therefore let the muscles recover as much as possible before strain is allowed upon them.

Hence the important rule of practice: keep the child after an attack of this disease recumbent for a year, if need be, to prevent the development of the serious paralyses that, because of the lack of this precaution, so frequently follow in the course of acute anterior poliomyelitis. This is a most important matter and should be noted by every physician.

#### KEEP SWEET AND KEEP MOVIN'

Hard to be sweet when the throng is dense,  
When the elbows jostle and shoulders crowd;  
Easy to give and take offense  
When the touch is rough and the voice is loud;  
"Keep to the right" in the city's throng;  
"Divide the road" on the broad highway;  
There's one way right when everything's wrong;  
Easy and fair goes far in a day,  
Just  
"Keep sweet and keep movin'."

The quick taunt answers the hasty word—  
The lifetime's chance for a "help" is missed;  
The muddiest pool is a fountain stirred,  
A kind hand clenched makes an ugly fist.  
When the nerves are tense and the mind is vexed.  
The spark lies close to the magazine;  
Whisper a hope to the soul perplexed—  
Banish the fear with a smile serene—  
Just  
"Keep sweet and keep movin'."

# THE NEEDS AND RIGHTS OF OLD AGE

An address read before The General Practitioners Medical Society of Columbus, Ohio, October 31, 1907, and discussing the mental, moral and physical aspects of old age

By C. F. GILLIAM, M. D., Columbus, Ohio

I CANNOT say that I feel complimented in having assigned to me, by the Program Committee, the topic, "The Needs and Rights of Old Age." If the selection was made upon the grounds that my age entitles me to speak with authority, I must strenuously object. To be fair, someone with a gray head, at least—mustaches don't count—ought to have been assigned this topic. You may have picked me out, however, upon the theory that a woman is as old as she looks—a man, as he feels. If that be the case, a wrong diagnosis has been made of my feelings. I am just as young as I used to be. My only regret is, that I am unable to make others feel and understand this fact. Another reason why I feel that an unfair advantage has been taken of me is this, I have been unable to find a word in my textbooks in regard to the needs and rights of old age. It may be that my search was not thorough enough or that my library is deficient in this particular respect, but the fact is as stated.

The other members, when assigned topics, look up the various authorities, improve a little on their phraseology, of course, and produce a paper which, for abstruse scientific information, makes them appear to be the wisest of wise guys. Why this discrimination against myself?

## *"Needs" and "Rights" Synonymous*

Pleasantries aside, however, I must confess that I feel much embarrassed in attempting to deal with this subject. The rights and needs of old age seem to me to be synonymous terms. Its needs are its rights, and its rights its needs. As to just what these are, you will have to ask both an older and a wiser man than myself. It

occurs to me, though, that sympathy and consideration are both rights and needs.

We are so apt to think that the elderly person has no sympathy or understanding with any of the things which are of the most interest to the younger. In my opinion, this is usually a mistake, and more heart-burnings and unhappiness is caused by this misconception than from almost any other one thing.

As a matter of fact the disposition of a large number of people who have passed or are approaching middle age to conceal their true age is because they are afraid that if it were known it would cut them out from the sympathy and companionship of the younger people and would also be construed by many as an advertisement of waning social and intellectual powers. Few of these people have lost their zest for the enjoyments of social life, or even that for adventure or an occasional lark, but they realize that the younger people think they have, and their sensitiveness prevents them from showing this feeling strongly, for fear the younger folks will think they are trying to force their society upon them. To use a slang expression, they are afraid they will be accused of "butting in."

## *Estrangement Between the Old and Young*

There is nothing much more pitiable than to see an elderly person playing the rôle of an onlooker, entirely, in a gathering where the young people predominate and in whose form of social enjoyment he may have the keenest interest. It may be cards, or it may be dancing, or possibly something even lighter than these. He thinks to himself, "How I should like to take part, but they don't want me, or I should act as a dampener

on the enjoyment of the young folks." As a matter of fact it is seldom that the young folks mean to be cruel or inconsiderate, but simply take it for granted that the older ones have no interest or sympathy with their form of amusement. If they could realize the feelings of the older person, and that he is even more sensitive and backward than the young person just making his *entrée* into society, there would be an entirely different atmosphere surrounding him. The elderly person, whether man or woman, who can cast off or subordinate this feeling and keep in touch with the younger people can usually make himself or herself much more entertaining than the average young person. Here is where the advantage of experience and early training comes in.

The fund of experience and reminiscence of the aged is nearly always interesting to the young. They can even excuse a little garrulity, though of course this wants to be guarded against as much as possible. You find a number of elderly people in each community who have a host of young friends. There should be many more. The old should study the young, the young the old.

The fault for this estrangement between the old and the young lies at the door of both, but grows out of the fact mainly that the older people, in their excess of caution for fear their children may make mistakes, betray a spirit of antagonism toward amusements which if kept within proper bounds are entirely harmless, and which could be so bounded if the elder were to take part in them with the younger folks. Not doing so, and being under the ban of their public disapproval, they too often are indulged in clandestinely, to the great injury of the character of the participants. Man is naturally a pleasure-loving animal and should not be too greatly circumscribed in this respect. Part of the needs and rights of old age are therefore denied them—that is sympathy and companionship—because they have first denied them to the younger. I am addressing these words to those who will be the old of the future, in the hope that their children's present may be happier, as well as their own old age.

I have devoted so much time to this phase of the subject because I believe that the mental well-being of a people is more essential to a happy and contented life than mere physical health. Indeed I think the latter is more dependent upon the former than is generally supposed.

We are all acquainted with the old saying, "Old men for counsel, young men for action," and in the main the saying is a true one, though there are many instances where both these qualities are embodied in both classes. As a general proposition, however, the world is governed by the counsel of the old and the action of the young. There are certain governing principles of men's life and actions, which are known to both the old and the young, but to the latter they are mere platitudes while to the former they are essential bedrock truths, brought home to them as such in the bitter school of life's experience.

While it is true that we are all the time making progress, we are not going at the rapid pace many younger people imagine. Some of the slow-going elders, it is true, occasionally get jolted out of the tail-board of the band-wagon, but not uncommonly the younger ones take a header by leaning too far over the dash-board. It is undeniable that the average man is not receptive after he has passed middle life and can seldom be depended upon to take the initiative, indeed is often a distinct drag upon the car of progress, but I cannot agree with Osler that he should be put entirely out of the way, for his vast experience, as compared with his younger colleagues, very frequently keeps the car from running off at a tangent.

How often have we older men seen some great discovery heralded which it was said would revolutionize things, but looking at the matter in the light of many previous experiences, we accept these things very charily, and in a few months or years see them referred to as mere fads or relegated to well-deserved obscurity. The real substantial discoveries, however, despite our incredulity, go on to well-deserved recognition. Summing the matter up therefore, we find that

each of the classes play a valuable part in the world's work, and neither can be safely ignored. The moral is obvious. Consideration for the experience of the aged, and consideration for and sympathy with the active, initiative labors of the enthusiastic seekers after truth, among the young.

One of the greatest errors which the young make in their treatment of the aged is a kind of condescending tolerance, which is almost as hard to bear as a direct insult. They are entitled to better treatment in recognition of their work in the past, even if they are now valueless in the world's work.

Respect above all things is the right of the aged. As before stated, the old person is peculiarly sensitive, and ingratitude bites like a serpent's tooth. The memory is ever present with them of the labors and sacrifices made in behalf of the young, and it seems to them that this is oftentimes all forgotten or completely ignored and that they are being purposely reminded that they are superfluous on the stage. This, in my opinion, is the main reason why so many old people say that they would welcome death.

We would think it the height of cruelty to make fun of or treat with lack of consideration a crippled child or one whose sight or hearing is impaired, but we forget that the very old person has entered his second childhood. They do not purposely have dim vision and dull hearing, but on the contrary, would give all they possess in the world to be restored to their normal condition in these respects, yet how common it is to see exhibitions of impatience with old people because of their lack of proper vision or when misunderstanding something which has been said, have it shouted out in the most irritable manner. Do we realize, as we see the poor old man or woman bow the head meekly with an apologetic air, and no doubt many times with a deeply saddened heart, at being the recipient of such treatment from one who probably in the years that are past has been the beneficiary of all the weary labor and patient sacrifices that a devoted parent is capable of making, just how cruel and inconsiderate such actions are?

Many elderly people have still a keen interest in everything going on and sufficient intelligence to appreciate them at their proper value, but their physical defects keep them from keeping in close touch with these things, and their lack of knowledge is made an excuse by the younger folks for ridicule, while their seeking for it is received with scant tolerance or irritation. So that I would like to reiterate, and reiterate again, that the aged need and have a right to consideration and respect. They also have a right to support when the infirmities of age prevent them earning their own. Not a grudging dependent support, but the cordial support inspired by a lively sense of gratitude, such as we should feel in paying back, only in part, a debt which we know it is impossible to liquidate in full. There are but few reputable old people to whom not only their own children but the community at large does not owe much, for the influence of a good man's or woman's life is almost immeasurable.

No doubt you are saying to yourselves that all these things I have been saying are mere platitudes, but platitudes are sayings which embody the moral sentiments of a people and cannot be too often or too strongly impressed upon the minds of the young. New discoveries may be made and great changes take place in our mode of living, but the principles which govern human life and action are fixed and unchangeable.

#### *Physical Rights of Old Age*

I have said nothing about the physical aspects of my subject and have devoted so much time to the moral side of the subject because I have but little to say of the former. I would say, however, in laying down the deeds and rights of old age, from a physical standpoint, that they need the same care, and have a right to it, as a child.

It has been said that men are but children of a larger growth, and this is particularly true of the aged, as to the care and exertion to which they should be subjected; the difference being only in the degree of intelligence and in the fact that as age progresses

in the old they become more and more helpless and in need of greater care, instead of growing away from the necessity for it.

Just what care should be given to the old, I freely acknowledge I do not know, never having made a close study of the subject. It is so much easier to deal in glittering generalities than it is to give definite information, and this I have been unable to obtain. I think it is safe to say, however, that the old person, as does the child, needs more sleep than one in the prime of life. And, in the very old person, this must not be confined to the night hours, but should be indulged in at intervals during the day. Most old people claim that they do not sleep well. Unlike the child, there is a sort of subconscious condition, which causes them to state that they have had hardly a wink of sleep during the night, while those who have been observing them know this to be a mistake. It is true, however, that they feel tired and unrested, with oftentimes much muscular pain and discomfort, so that, when fully awake, they arise to get rested, though probably in an hour's time they will be found dozing in their chairs. We must recognize these conditions and sympathize with them, instead of getting irritated at them for arising at unseemly hours in the morning, while at the same time crying out for want of sleep.

In the matter of food we should also recall their likeness to children and try to provide them with nourishing, easily digested food, in moderate quantities, at somewhat more frequent intervals than is indulged in by the robust individual in the prime of life. In my opinion, it is the neglect of this precaution which is the origin of the alternating constipation and diarrhea with which a large proportion of old people are afflicted. It is probable that in a certain proportion of cases it is wise for the old person to take a slight amount of stimulant with each meal, in order to stimulate the digestive functions. Whether this stimulant is to be alcoholic or a little strychnine, carminative or other allied drug can be safely left to the judgment of the physician in each particular case.

A reasonable amount of exercise for the aged, both mental and physical, should be insisted upon. Light reading that will keep the mind interested without taxing it too much is desirable. Poetry, fiction and the current magazines and newspapers will usually fill the bill and serve to keep them in touch with, and posted upon, those things which are usually of most interest to the young, and by this means such reading begets a community of interest between the two classes. The enthusiasm with which an old person enters into a discussion of a piece of fiction recently read is only equalled by the youth. The old live in the past, the young in the future, and the pleasure of looking back and recounting the experiences of the past is only equalled by the pleasure of the young in looking forward to and hoping for what the future may bring forth.

The old always crave the companionship of the young, and it should be accorded them much more than it is. Ever since I have felt age creeping upon me I have made it a point to try and keep in touch with those things which are of interest to the young. If I am with the young ladies, I am interested in art, music, fiction, poetry, and last, but not least, the fashions in hats, wraps and suits. If with the boys, I feel ashamed to have anyone better posted than myself on the horses, prize fighters, baseball or football players, or the latest popular play or song. In politics, I consider it not only a duty but a pleasure to keep in touch with conditions in city, state and nation. Much of this knowledge may not be of any practicable value, but it adds much to the pleasure of life and has a tendency to broaden one's views, and after all, aside from our hopes for the future, that is about all we live for. After this digression, I will say that I firmly believe that the reason grandparents usually lavish so much affection on their grandchildren is because of their craving for young society, and for an opportunity to give demonstration of that pentup affection which is held so rigidly in reserve by the majority of us, especially during the prime of life. They love also to have some-



one to look up to them as the embodiment of all wisdom, and as their mentors, realizing that to these young ones, at least, they are not regarded as "has beens," who are encumbering the earth.

The physical exercise of the aged ought to be taken upon the same principle as their mental—lightly and in moderation; but whenever possible, a part of it should be in the nature of some domestic, useful occupation, being careful to let them feel that it is in no sense obligatory. The old person takes as much pride in the accomplishment of some little undertaking of useful labor as does a child, and should be accorded the same hearty recognition for it. The glow of pleasure which comes from such recognition can hardly be overestimated, while the hurt which follows an impatient or irritable acknowledgment of the service is so great that if we could have it properly brought home to us would make us many times more considerate than we are. It is the small things that make up the life of the old, as they do of the child.

Give the aged also a reasonable amount of amusement. Don't take it for granted that because they are old such things no longer have charms for them. And when such opportunities are afforded don't allow them to come home with a heartache by refusing to answer questions for information, or explanations which are made necessary to the proper understanding of the play or game by reason of their defective sight or hearing, or possibly by reason of the fact that they are not in touch with that particular form of amusement.

See to it that proper elimination is secured from the system, through the right kind of food, baths, exercise and medicines. It is the height of cruelty to ignore the complaints of the aged, and such sympathetic enquiry should be made into them as is dictated by a humane consideration for their welfare.

As there is always a tendency to arteriosclerosis in the aged, and also to subacute and chronic bronchitis, as a result of this condition, we can hardly make a mistake in occasionally giving them a little round of the iodides and arsenic, being careful to watch the stomach, of course. Much discomfort is at times experienced by the old as a result of a pulse of too high tension, due to the lack of resiliency of the vessels and deficient elimination. Under such conditions much comfort and satisfaction will follow the administration of nitroglycerin for a few days in moderate dosage, until the tension is relieved and kept at about the normal for a time. It is hardly necessary to call attention to the necessity of having the aged adequately clothed, both day and night, as owing to the deficiency of their circulation they are apt to suffer much discomfort if this precaution is neglected.

I am fully aware how inadequately I have treated this important subject, but if I have said anything which, in the slightest degree, will in the future make you any more considerate of the rights and needs of old age than you have been in the past, I shall feel amply repaid for whatever time and labor I may have expended in the preparation of this paper.

#### MY CREED

I would be pure for there are those who trust me;  
I would be true, for there are those who care;  
I would be strong, for there is much to suffer;  
I would be brave, for there is much to dare;

I would be friend of all—the foe—the friendless;  
I would be giving and forget the gift;  
I would be humble, for I know my weakness;  
I would look up—and laugh—and love—and lift.

HOWARD ARNOLD WALTER, in *Harper's Bazar*

# THE EVOLUTION OF THERAPEUTICS

The therapeutic tendencies of the day, especially along alkaloidal and active-principle lines. A paper read before the Tri-County Medical Society, of Morris, Sussex and Warren Counties, New Jersey

By ALVAH C. VAN SYCKLE, M. D., Hackettstown, New Jersey  
President of the Tri-County Medical Society

A WATCHFUL sentinel was slowly pacing up and down the ramparts of the sullen fortress in the dead of the night, when suddenly there appeared a messenger saying, "Watchman, what of the night?" So we today are standing as sentinels on the fortress of medical bulwarks and messengers are asking, "Watchman, what of the night?" How many of you who received your diploma a quarter of a century or more ago, would think of following the art of therapeutics as laid down by your professors at that time? There is no phenomenon so stupendous, so bewildering and so interesting to man as that of his own evolution in society.

It appears that at the beginning of the 20th century the teaching of evolutionary science as applied to society is that there is only one way in which the rationalistic factor in human evolution is controlled, namely, through the instrumentality of religious systems. Thus we have today the evolution of Eddyism, Dowieism, faith-curism, Christian alliance, and last, but not least, a new cult—osteopathy. The latter has been knocking at the doors of our legislature now for two years, both to be admitted and recognized as a new school, and while this evolutionary doctrine has been going on in the systems of religious schools, it has also been advancing in the therapeutic field of science. One eminent writer has said that "all our progress is an unfolding like the vegetable bud. You may be a fine diagnostician, but if you have not the mastery of modern therapeutics to render your diagnostic acumen virile, what good will you accomplish in the curing of disease; or would you by the daring of chance pluck the flower of safety from the jaws of death?"

Let us for a brief period consider a few of the newer therapeutics; and first we will take up the alkaloids:

## *Alkaloids in the Pharmacopeia*

The new Pharmacopeia recognizes twenty-four alkaloids and active principles. The most prominent of these are aconitine, apomorphine, hyoscyne, strychnine, digitalin and veratrine. There are nine others that are unofficial but equally valuable. They are berberine, brucine, coniine, curarine, duboisine, emetine, gelseminine, muscarine, quinidine.

As an antipyretic nothing equals the trinity of remedies viz.: aconitine, digitalin and veratrine. Dr. Shaller has had quick results in pneumonia by dissolving aconitine in one-half to one ounce of hot water, giving it every half hour until a reduction of temperature is perceptible. Shaller's rule for children is: one granule of aconitine, one gr. 1-134 for each child's age, and "one extra for the glass," in 24 teaspoonfuls of water; the dose of this solution being one teaspoonful every 10 to 60 minutes. For children under one year the best plan is to divide the dose by the weight, A child at one year averaging 15 pounds, the dose for a year may be divided by the child's weight so that a child weighing 7 1-2 pounds receives one-half the yearling's dose, regardless of age.

Van Renterghem says that "aconitine occupies the first rank among defervescents;" by virtue of its sedative action on the vasomotors it slows the pulse and heartbeat. Combined with strychnine and digitalin Burggraave considered aconitine invaluable as a preventive of fever or inflammation in the puerperal, and also surgical sepsis.

With digitalis it acts as a diuretic. Combined with strychnine and hyosine in alcoholic delirium it acts like magic. Brunton enumerates aconitine as being useful in pleurisy, pneumonia, phthisis, peritonitis, pericarditis, rheumatic fever, gout, erysipelas, otitis and other fevers. Butler speaks highly of this drug in cerebrospinal fever. Merrell pronounces it valuable in the eruptive fevers. O. Hutchinson found it relieved the pains of carcinoma; he found that it acted as a sedative in epididymitis and gave much relief in tobacco-heart. Ringer says that in spinal irritation and intercostal neuralgia an aconitine ointment relieved the pains. Wood considers it the best remedy for cardiac hypertrophy. Ellingwood recommends it in acute cystitis and nephritis, also in the onset of diphtheria and croup.

#### *Apomorphine a Valuable Remedy*

We will pass on to another drug the writer prizes very highly, viz., *apomorphine*. This used hypodermically in 1-10-grain doses relieved a patient of hiccough, of which she had been suffering two or three hours, in less than two minutes. In a dog that had been poisoned by strychnine, one of our veterinarians relieved the effects in less than two minutes, timed by three different watches, and the dog was saved. In cases of attempted suicide emetine far excels the old-fashioned stomach pump or mustard-water potions. Dr. J. S. Horsely injected apomorphine in a case of strychnine suicide, of which he had no hopes. The patient was eventually cured. Shoemaker uses it for spasmodic croup, asthma, convulsions, etc. It is an excellent expectorant. In an adult 3 or 4 granules are given every half hour until relieved—for a child 4 to 6 years old dissolve 24 granules in 3 ounces of water. A child of 2 years, 20 granules in 3 ounces of water; a child of 1 year, 15 granules in 3 ounces of water; the above dose to be given as an expectorant.

We pass on to another one of the alkaloids, namely *veratrine*. Van Renterghem

says: "One should not forget that the rise of arterial pressure and the great loss of heat by the skin occasioned by the fever means something, for this increase of intravascular tension does not necessarily imply an increased oxidation in the tissues, as has been claimed. But it is certain that the state of depression of the circulatory functions occasioned by fever adds a very serious factor to the other causes of fever-heat: that veratrine suppresses this state and with it its consequences." Thus in our arsenal of therapeutics we hold no medicament so powerful, so positive, so manageable to combat fever as veratrine. Van Renterghem uses it in enteric fever, puerperal fever, pneumonia, the exanthemata, etc. Particularly in eclampsia do we find veratrine standing over this dreaded condition as an invincible giant and saying, Thus far and no farther shalt thou go. The proper dose to be given hyperdermically in hot water or alcohol is gr. 1-12. By this means we save the brain from the imminent peril threatening it. In the early stages of sthenic pneumonia it offers the best-known method of reducing the temperature and thereby lessening congestion.

Dr. Edgar, in his classic work on "Obstetrics," referring to the treatment of eclampsia, says that veratrine "is one of the most effective as well as safest medicinal antieclampsics." For the last three years he has abandoned the use of morphine, since it seems to prolong the post eclamptic stupor, while it increases the tendency to death during coma, by its interference with the eliminative processes. Veratrine stands second to chloroform, then follows chloral in this most dreaded of diseases in the pregnant patient. Do not hesitate to keep the pulse down to 60 or 65 beats, if you have not the alkaloid veratrine, do not hesitate to use 20 minims, hyperdermically, of the tincture. While under the influence of the full therapeutic dose of veratrine be sure always to keep the patient in the recumbent position.



# Washington—A Vision

BY CHARLES EUGENE BANKS

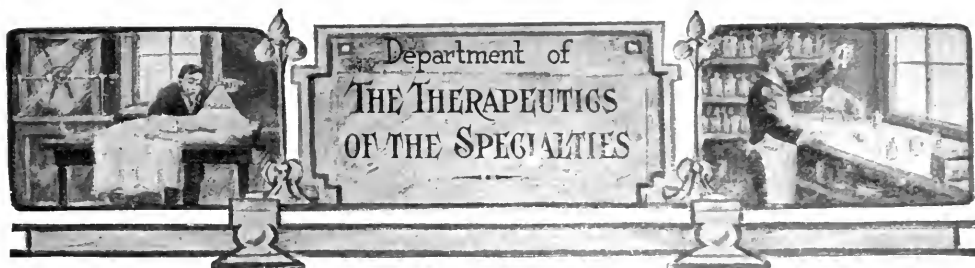
SOME months ago we published a poem by Mr. Banks, one read on the occasion of a banquet given to Vice-President Fairbanks by the Press Club of Chicago. It was fine—fine! We are glad to have this opportunity to publish another contribution from the same pen; while we regret that it did not reach us in time for the February number of *Clinical Medicine*. However, this splendid *Vision* is a fitting theme for any month.

Dear Charlie Banks! Not only is he one of the most brilliant of men, fired through and through by the true poetic spirit, a true literary genius, but also one of the kindest, sweetest souls that it has been our pleasure to know. He has broken at last with the rush and madness of this business maelstrom, Chicago, and betaken him with his family and household gods to his own bungalow out on the Pacific slope, in the shadow of the Great Mountains. His friends should write him at Waupello Lodge, Monteria, Washington.

Before his monument I stood alone.  
Night brooded o'er Potomac, and the sky  
Was set with mystic symbols of the stars.  
No sound disturbed the stillness save the hum  
Of vibrant wires that bore the State's behests.  
Ah, sad-sweet spell of that great patient soul!  
The sound of winter winds was in my ears;  
I saw the bloody footprints in the snow;  
I saw the field of battle strewn with dead;  
I saw the trackless snow. Then suddenly  
The marble that commemorates his deeds  
Transparent grew, and, pale as mountain snow,  
I saw him, cloaked in soulful majesty  
Mount slowly to the summit of the pile.  
Thus Washington again surveyed the world.  
To north and east and south and west he turned,  
The light of gladness growing in his eyes.  
"O blessed hour!" he cried! "Who could foresee  
Such great effects from simple duty done?  
The ground was ready ere the seed was sown,  
And patriot blood flowed into patriot veins,  
Else had the harvest soured on the ground.  
What gracious fruitage of those troubled years!  
Where savage nomads roamed to burn and kill,  
Five million homes stand peaceful and secure.  
Where poisonous vapors rose from swamp and bog  
Are meadows rich with clover and with corn.  
The arid plain where naught but cacti grew  
Has felt the touch of water and is fair.  
Bridged all the rivers, mountains rent in twain,  
Earth's wealth uncovered, cities scattered wide,  
And all the land from tossing sea to sea  
A cobweb knit of shining threads of steel!  
Could those brave souls whose bleeding footsteps marked  
The faint first trails into this fair domain  
Know of this answer to their sacrifice,  
How sweet were then the memory of their pain."

Long stood he so with folded arms and gazed  
Upon the largess Nature's hand had sown,  
Then lifting up his face he prayed that God  
Might bless and keep the people everywhere.

O ye who hold the silken reins of State  
Ye who would lead, and ye who follow on,  
Art willing all that such a thing should be,  
That those clear eyes should lift their waxen lids  
And look unveiled into your inmost hearts?  
Or rather would you on such thought cry out;  
Sleep on, O shade of Washington, sleep on!



## GOPREMA, SAPREMA AND SEPTICEMIA

As observed during the puerperal state. How  
to diagnose them and how to treat them.  
With a description of a few illustrative cases

By FRED FLETCHER, M. D., Columbus, Ohio

**P**UERPERAL complications offer many diagnostic perplexities, for in their incipency the symptom-complex is common to both the autogenetic and exogenetic types of intoxication. The successful treatment of this class of cases demands the early recognition of the exciting cause, and the intelligent application of remedial agents.

### *What is Copremia?*

Copremia is a clinical condition, the symptom-complex of which results from an excessive resorption of putrefactive products of retained feces. The toxemia is of autogenetic origin—a systemic saturation with chemicals of the ptomaine and benzol group, and is in no wise dependent upon a wound or gross pathological lesion.

It is of the greatest importance that nothing should interfere with the normal activity of the excretory organs during pregnancy, for at this time all excreta show an increased toxicity. To this end the physician must be a watchman, especially during the latter months of gestation, when the overtaxed physiological processes, pressure from the gravid uterus, physical incapacity and habits of life, make the patient prone to neglect nature's call.

The symptomology of copremia varies widely in the degrees of severity—from

physical indisposition and hebetude to phenomena so alarming and deceptive that they counterfeit the exogenetic infections. There is always a history of obstinate constipation, and the remarkable constitutional symptoms follows the resorption of poisons manufactured in the stagnant and decomposing intestinal mass. The following history will illustrate the character and peculiar behavior to treatment of this form of self-poisoning.

### *A Case of Copremia*

Mrs. G., aged 40; a woman of robust physique, and the mother of six children. The patient can not recall a time when she was not constipated, and for years has treated herself for this symptom. A lapse of from one to four weeks without a bowel movement is not infrequent. This symptom was exceedingly obstinate during the last gestation, and fearing lest miscarriage might follow too active purgation, the intestinal tract was accorded but little attention for eight weeks previous to confinement. The woman was delivered by a midwife of a full-term baby. Convalescence was uninterrupted for a period of five days, when, owing to a chill, I was requested to see the patient.

Vertigo, malaise, alternate flashes of heat and cold preceded the chill, which was

ushered in with great severity, and followed by profuse sweats and restlessness. She complained of a throbbing headache, cephalodynia, nausea, nervousness, insomnia, flatulency, abdominal pain, physical weakness, and a general muscular soreness. Lactation was established, and the lochia was normal in color and amount. No bowel movement had occurred for twelve days. The temperature was 104° F.; pulse 120, full and bounding. The facies was anxious, and the skin bathed in perspiration. The abdomen was tympanitic, but not tender, and no distinct mass could be outlined in the large bowel. Per vaginam the uterus was found subinvolved and retroverted. The cul-de-sac was free.

#### *Treatment of Copremia*

The history, symptomology and negative pelvic examination stamped the case as one of copremia. Salines were given (and at a later time enemata), when in this, as in all copremic cases, there occurred symptoms of diagnostic moment, namely, the upward trend of the temperature and general aggravation of the patient's condition for several hours after taking the cathartic. But the symptoms subside (as they did immediately in this case) after the bowels have been thoroughly emptied. That this should occur seems obvious, in view of the fact that the excessive amount of fluid thrown into the intestine incident to purgation liquefies the fecal mass, liberates the ptomaines and facilitates their resorption. The termination of the febrile movement is an index to the removal of the fever-producing condition, and takes place more gradually in copremia than sapremia. Copremic cases demand the application of the "clean-out, clean-up and keep-clean" principles. In the case just cited, salines and sulphocarbolate of sodium were given; the temperature receded by lysis, and reached the normal three days after the institution of treatment.

#### *Sapremia*

The most classical type of this febrile malady is encountered during the puerperium. The circulatory phenomena incident to

normal labor occasions an increase in nutrition for the repair of the wounded viscus. Occasionally this "nutritive" fluid accumulates within the uterine cavity; a blood clot or the secundines are retained, and as a sequence to invasion with saprogenic microorganisms, becomes putrid. The culture-medium ferments, ptomaines are generated, and their resorption from the placental site gives rise to a complexus of resulting symptoms called sapremia.

The clinical manifestations vary according to the amount of available culture media; the quantity, toxicity and rapidity of absorption of the poisons from the putrefying area. The byproducts (ptomaines) are incapable, *per se*, of increasing either in numbers or amount, and since they rather than the bacteria (saprophytes) enter the free blood-current, we can account (with the exhaustion of the culture-pabulum) for the occasional spontaneous cessation of sapremic symptoms.

Prodromata appear within a few hours (or rarely several days) after labor or incomplete abortion. Headache, malaise, nausea and chilly sensations are the usual subjective symptoms. The onset may be subtle, and a pronounced chill gives the first admonition of an insulted neurocirculatory system: the chill followed by an alarming rise of temperature.

Active treatment is imperative, for with the advent of the incipient symptom it is too late to realize of the proverbial "ounce of prevention." To procrastinate is but to endanger the patient's life from an overwhelming toxemia. If a conservative line of treatment is necessary, the giving of a sterile vaginal douche and packing of the vagina with iodoform gauze will suffice. The gauze should be removed at the end of twelve hours, when it will be found that the secundines or blood clots have been expelled from the uterus. A sterile douche will cleanse the vaginal tract; further packing is unnecessary. Quinine in 10-grain doses, every four hours, can be used to advantage.

However this "conservative" treatment is only very seldom justifiable. For convalescence is more prompt, and the pelvic

sequelæ less frequent, when the physician acts promptly. It is best to administer an anesthetic, carefully examine the pelvis, and under aseptic precautions relieve the uterus of its putrid debris, and pack with gauze. The cervix should be dilated so that it will admit one finger. It is best to wrap the end of the curet with a piece of gauze. The larger pieces of secundines can be removed with a pair of dressing forceps. Thorough drainage is an indispensable feature. Iodoform gauze answers the purpose admirably—it is an efficient disinfectant, controls hemorrhage, and serves the “something” upon which the subinvolted uterus can contract.

The after-treatment has to do with the giving (when it seems necessary) of stimulation. The quinine can be stopped at the end of twenty-four hours, and a bowel-movement secured by the giving of two and a half ounces of castor oil. The packing should be removed at the end of eighteen hours, and should be followed by a hot vaginal douche, which can be given once or twice daily for the first week. The patient should remain in bed for a week or more.

“Typical, sudden and gratifying is recovery, when in one of the cases of typical sapremic toxemia the putrefying pabulum is extracted from the uterine cavity. The temperature falls within a few hours and all outward signs rapidly disappear.”—(Warren.)

#### *A Case of Sapremia*

Apropos of this the following case is illustrative:

Mrs. H. L., aged 23, married and the mother of one child. The patient became pregnant, and in consequence ingested many highly lauded ecbolics—without results. However abortion followed the introduction of a hair-pin into the uterine cavity. Hemorrhage occurred, pains were severe and the product of conception was expelled, in part, on the following day. A chill, prostration, gastric disturbance, offensive lochiæ, and a continuance of hemorrhage made medical attendance requisite three days later. The temperature was 104°F.; pulse 126. The

congested face, trite facies, coated tongue and restlessness were present. Vaginally, there was tenderness, and the large retroverted uterus would admit two fingers.

Ether was given, the uterus emptied, and, together with the vaginal tract, packed with iodoform gauze. The temperature was normal on the evening of the second day, and the patient made a prompt recovery.

#### *Septicemia*

Pus-producing organisms are found normally in the vaginal tract. They play a saprophitic rôle just so long as environment is neutral, and the immunizing properties of the uterine secretions remain active.

Clinically, the cases of septicemia differ, and its point of gravity depend upon the number and virulency of the bacteria absorbed. A violent infection may cause death within twenty-four hours, or a gradual lymphatic absorption create grave organic changes, lower the physical resistance, and give rise to a chronicity of symptoms.

Septicemiæ may develop within a few hours after delivery, but as a rule the onset is insidious compared with that of sapremia. The physician is usually called one week after confinement or incomplete abortion—after the patient has had one or more chills, shows a moderate degree of temperature, and presents the symptoms of a profound toxemia.

As time goes on the patient begins to look ill; danger signals become obvious and the symptoms persistent. The chill is repeated, sweats recur, the temperature shows the morning remission and evening exacerbation; the circulation is quickened, the appetite perverted, the facies trite, and the body takes on the peculiar septic cachexia. The patient assumes the dorsal decubitus, flexes the limbs, and complains of severe abdominal pain. The belly is rigid, tympanitic, and so exquisitely painful that even the weight of the bed clothing becomes unbearable. Digital examination reveals vagina hot and inflamed. However, a bimanual examination is, at this stage, as impossible as it is impracticable. Toward the end of the malady paroxysms of delirium alternate

with stupor; the viscera congest, hiccoughs are distressing, vomiting becomes obstinate; a septic diarrhea supervenes; the erythrocytes disintegrate, and, as the "typhoid" state deepens, exhaustion becomes extreme, and death ends the scene.

#### *A Case of Septicemia*

Mrs. R., aged 30, and the mother of three children. During a fit of despondency over the prospects of giving birth to another child, the patient, when three months pregnant, introduced a semirigid catheter into the uterus, and produced an abortion. Household duties compelled her to be up and around, and for the sake of cleanliness she resorted to an occasional vaginal douche, utilizing for the purpose a fountain syringe previously used for the taking of (rectal) enemata. . . . To chronicle the consequences would be to reiterate the symptoms already given. The case was moribund when seen, and rapidly proved fatal. She was treated expectantly, and was not cured.

The spread of infection should be measured by minutes, not hours. In the true form of puerperal septicemia the uterus should not be cureted. Prophylaxis offers the only satisfactory solution to the problem. Pryor, of New York, was able to reduce his

mortality to four in a series of thirty-seven cases. He considered treatment under a general and local heading. Stimulation was used, and toxins were eliminated by frequent intravenous infusions of normal salt solution. Locally, he irrigated with an antiseptic solution, packed the uterus with a 10-percent iodoform gauze, then made a long posterior vaginal opening, removed the debris from the cul-de-sac, and enveloped the uterus in a large piece of 5-percent iodoform gauze. The uterine packing was removed in three days, the viscus irrigated and repacked with gauze. The gauze in Douglas's pouch was removed at the expiration of one week, when the cavity was thoroughly cleansed and repacked with gauze. It was claimed that this treatment localized the infection, and that the systemic absorption of the iodine combatted the toxemia.

I have made the posterior vaginal incision in only two cases, with two deaths. This mortality would have been expected under a more conservative line of treatment—irrigation, stimulation and the use of antistreptococcic serum. The serum treatment has proved disappointing, and further clinical observations are necessary before opsonic therapy can be offered as a curative agent. Hysterectomy in these cases is infrequently indicated.

## TREATMENT OF ULCERS OF THE LEG

A novel and successful method, with a full and detailed account of the technic of its application, including the application of skin-grafts

By JULIUS T. ROSE, M. D., Brooklyn, New York

ULCERS of the leg, especially of the lower half, are usually intimately associated with some interference with the return circulation. Whether treated or not treated by a competent physician, their history extends over months, at least, and maybe years. They are of all sizes, shapes and conditions, with a tendency to grow worse rather than better. Many of

them are extremely painful, and the degree of pain, oftentimes, is in inverse proportion to their size. Enforced recumbency in bed through sickness, or a broken bone, has often been the cause of the healing of very chronic ulcers of the leg. This gives the key to a very important part of the treatment; the circulation must be supported and stimulated, then, as the base of the ulcer



cleans up and becomes covered with healthy granulations, skin-graft it, without anesthesia.

The method outlined below is not a theory but an actual, tried-out means of rapidly healing ulcers of the leg. It is simple to understand, easy to apply, yet wonderful in its results. It is not necessary to put the patient in the hospital, or to confine to bed or chair, or to elevate the leg. Just follow these directions and success is yours.

#### *Outline of a Successful Treatment*

1. Give a good tonic containing strychnine. Give plenty of nourishing food and good fresh air. Keep the bowels open. If mercury and the iodides are indicated do not fail to give them.

2. If inflammation is present in and about the ulcer, reduce it by using "wet dressings" of "red wash" (zinc sulphate, 1 dram; tinct. of lavender, comp., 2 ounces; water, 1 quart) or Thiersch's solution, or a 5-percent aqueous solution of ichthyol. Keep these wet dressings about the leg continuously until the acute signs have disappeared—this will usually be inside of forty-eight hours.

3. When no acute inflammation is present, or as soon as it has been reduced, as above, clean and shave the leg from ankle to knee, sprinkle over the ulcer a good layer of powdered naphthalin flakes, and spread over this some diachylon ointment. Then strap the leg from the ankle to well above the calf with zinc oxide adhesive plaster strips, 3-4 inch wide and long enough to reach nearly twice around the leg. They are to be applied in figure-of-eight fashion, crossing one end over the other in front, somewhat below a right angle, beginning by applying the middle of the strap to the back of the ankle, then with equal tension applying first one end and then the other in an upward direction about the ankle. Let each succeeding strip overlap the preceding one by about one-third inch and keep the edges parallel. Be careful not to have any folds or bunches, and keep up an equal pressure throughout.

Cover the foot and leg thus strapped with a gauze or muslin bandage. This dressing should not be disturbed for a week or ten days. At the end of this time remove by cutting it from below upward with bandage scissors, being careful to keep the blades at right angles to the skin when cutting. The adhesive plaster can then be removed in one piece without any difficulty.

The change in the appearance of the ulcer will be very satisfactory. In the majority of cases a good layer of granulations will be found covering the base and creeping up on the edges. If not entirely clean and healthy, restrap for another week, as before. If possible, dress the granulating ulcer with boric-acid ointment just preceding the skin-grafting, as this seems to be an ideal preparation for this proceeding. In any case be sure of healthy granulations before grafting.

4. The operation of skin-grafting the ulcer is exceedingly simple, relatively painless, and applicable to all cases. No elaborate preparations, no anesthetic, and no assistant are required.\*

#### *Technic of Skin-Grafting*

- a. Clean the skin of the leg somewhere above the ulcer with a little soap and water or a little alcohol and flush off with salt solution (common salt, 1 dram, boiling water, 1 pint). Flush off the granulations with some salt solution. It is not necessary nor is it advisable to curet or rub or scrub them. They are all ready for the grafts.

- b. Having sterilized a very sharp ordinary razor and pocket-probe by putting them into 5-percent carbolic for fifteen or twenty minutes, lay them in some salt solution. Then moisten the skin that is to furnish the grafts, put it on the stretch with one hand, while the other, holding the razor as for shaving, with a sawing motion, and without any pressure, cuts a very thin, translucent graft. The pain will be very slight if the razor is sharp and the graft is thin.

- c. Spread the graft by laying the edge of the blade against the granulations, catch the

\*For fuller directions see "Skin Grafting without Anesthesia," The Medical Record, Nov. 16, 1907.

end of the graft with the probe and, holding it still, withdraw the blade from beneath the graft. This spreads it. It may be moved to any position by means of the probe. Make the grafts overlap one another if possible, so as to cover completely.

d. Lay several thicknesses of silver-leaf (such as painters use) over the grafts and the area from which the grafts were removed.

e. Strap the leg from ankle to above the calf, as before, only smear that part of the adhesive that overlies the grafts with boric acid ointment, to prevent adherence to the grafts.

Remove this dressing in a fortnight, or two weeks. The ulcer and the denuded area will be found to be completely healed. Restrapp the leg for a week or two. If necessary, later, wear an elastic bandage or stocking.

Ulcers or granulating wounds anywhere on the surface of the body may be healed by this same method. When thus healed they are not liable to break down again, because they have a skin surface, and contain less scar tissue than is usual in such cases.

This method gives the best possible results, in the shortest time. The dressings are few and far between, and the patient goes

on about his work, as usual, well pleased with the progress and the result. Treat your next ulcer by this method, Doctor, and you will be pleased, surely, for you will succeed as never before in helping nature to do her best in healing these troublesome cases. A good work, well done, and you did it.

#### *Resume of the Treatment*

1. Build up the general health.
2. Stimulate the circulation.
3. Reduce acute inflammation.
4. Support the return circulation by figure-of-eight adhesive strapping.
5. Stimulate the growth of granulations beneath the strapping.
6. Skin-graft these granulations, when fit, with very thin translucent grafts taken from the leg above with a very sharp razor without anesthesia.
7. Apply silver-leaf, several thicknesses.
8. Strap the leg as before.
9. Results: Granulations prepared, one week.

Ulcer healed by skin grafts, two weeks.

Total, all well, three weeks.

A grateful patient.

A happy doctor.

## VENTROSUSPENSION OF THE UTERUS

A brief description of Kelly's method of performing this important operation, with some of its advantages; written from an experience with twelve cases

By GEORGE E. MAY, M. D., Newton Centre, Massachusetts

I AM calling attention to this by no means new method of radical cure for retrodisplacement of the uterus and as an aid in treatment of prolapsus, for the reason that I have not seen the operation done by any of my colleagues, nor have I seen mention of the method in any literature other than Kelly's "Operative Gynecology," the latest edition of which is 1898. In reply to a recent communication, however, Kelly tells me that he is constantly doing the

operation in preference to all other methods, and has seen no reason for modifying his original technic.

The operation consists in a median incision, not necessarily more than one and one-half inches in length, unless the abdomen be thickened by adipose to an unusual degree. The incision may be, if desired, so near the symphysis that the resulting scar is entirely obscured by the hair. The peritoneum is opened to the full length

of incision, and caught by artery forceps on each side. The vermiform appendix and uterine adnexa should be palpated and any required treatment administered. The fundus is now raised by the insertion of two fingers, any adhesions being carefully broken, and brought to a position of ante flexion, the posterior surface of the fundus being, of course, turned up toward the incision.

The fundus is next drawn up into the incision by a tenaculum and medium-sized silk sutures are passed through the peritoneum on one side of the incision, the upper suture transfixing the fundus at a point about on a line with the tubes, the other half an inch below, and the peritoneum on the other side. These sutures, after careful exploration by the finger to make sure no loops of intestine are involved, are tightly tied, and if properly introduced are entirely within the peritoneal cavity. The external wound is closed in the usual way.

By this method no strain is brought to bear on the sutures, the uterus being in ante flexion. The peritoneum alone being used as a point of fixation, ligaments readily form which allow of a sufficient amount of mobility of the organ.

The after-treatment should include, for the first three days, the use of the catheter every four to six hours unless the urine be spontaneously voided at short intervals, thus guarding against undue tension upon the newly-placed sutures by a distended bladder.

Kelly reports several hundred cases by this method, including observations of a considerable number of subsequent pregnancies, the results being remarkably good.

I have operated upon twelve patients by this method, two of whom have become pregnant and have presented no difficulties either during pregnancy or parturition. I have examined nearly every case at a sufficiently remote period from the operation to feel assured of its permanent success.

The operation appeals to me as one of comparative ease and simplicity, as placing the organ in a nearly normal position in which it is freely movable, and as being free from the objection to which ventrofixation of the anterior surface of the fundus gives rise on account of the resulting abnormal position, and occasional serious complications during the period of pregnancy and parturition.

## PRESERVATIVE MEASURES IN OBSTETRICS

Some means and methods which should be adopted  
in the conduct of obstetrical operations, and  
which will prevent mortality and reduce morbidity

By ROBERT J. JAMES, M. D., Seattle, Washington

WHILE our knowledge and technic in obstetrical surgery has made marked advancement in the past twenty years, I believe that today it is a much neglected art, especially away from large hospital centers. Too much mutilation is done by unskilled, energetic physicians, under unfavorable conditions, especially by forceps manipulations through the vaginal route.

When we consider that asepsis and good technic mean everything to the mother and

child, it is remarkable that the mortality is not higher.

### *Practising Obstetrics by Main Strength*

If a certain method of procedure has not been decided upon beforehand and labor has progressed a number of hours with inefficient pains, little dilation and a large head, the first thing the physician thinks about is forceps; and he resorts to a high-forceps operation, perhaps sacrificing the child and crippling the mother. That is

what we could call practising obstetrics by main strength—not that I decry the use of forceps, for in their place and under certain conditions forceps are useful instruments. I have myself used them on a number of hard cases where afterward my better judgment told me that a Cesarean section would have been better and safer. A high forceps delivery of a large, hard head in an exhausted mother has a higher mortality than a Cesarean section performed on a patient in fairly good condition, and in the case of Cesarean section we have a living child with no after-effects to contend with in the mother, and quicker convalescence.

Considering the great number of difficult labors which are terminated by operative measures, the mortality is quite low—but the morbidity is very high. If a woman is pulled through a difficult labor by even an unskilful attendant, the friends and neighbors are satisfied. The question of morbidity never enters their heads, although a woman may be damaged for life and perchance later falls into the hand of a surgeon who performs one or more pelvic operations, after which she may have fairly good health. We have all read articles written by “physicians of the old school” who claim to have attended thousands of cases without ever having to apply forceps or sew up a lacerated perineum, which, of course, is all nonsense. This class of physicians has never been trained to diagnose pathological conditions of the pelvis.

Let us consider some of the factors which would decrease the mortality and morbidity in obstetrical cases.

#### *Preservative Measures in Obstetrics*

First: Pelvimetry, if carefully and conscientiously carried out, would give us a pretty good idea of the size and contour of the pelvis, and by a vaginal examination we would get an idea of the muscular condition of the soft parts, uterus and perineum. Some women have weak abdominal muscles, which, combined with an unstable nervous system and strong uterine and perinei muscles, makes labor very difficult.

Second: As a rule after the sixth month a woman should be examined once a month to determine as nearly as possible the comparative size of the fetal head to the diameters of the mother's pelvis. I believe it is better to bring on labor at the eighth month, if the child is very large, than to allow it to go on to the full term and take chances of deep lacerations and infection. In the first five years of my practice I figured that about twenty percent of my cases went from one to three weeks over term. This is one of the great causes of difficult labor. The majority of women can give birth quite easily to a child weighing from seven to seven and a half pounds, but they will have a difficult time with a child of nine to twelve pounds, particularly so if we have a malposition to deal with.

Third: The home facilities in the majority of cases are too meager to do good, clean work. We should have two large pans for boiling and holding instruments, and two or three bowls for solutions, and plenty of hot and cold sterile water. Outside of a hospital, one hundred percent of women are confined on a bed, which makes it very inconvenient, especially if operative work is necessary. Every woman should be confined on a table. An inexpensive one can be made by the husband, of pine boards, for the occasion. I usually have it made 28 inches wide, 32 inches high and 5 feet long, with a block 2 inches high nailed on top at each side, one foot from the end, to rest the heels against during pains. Over the table a heavy blanket or quilt is placed double, then a rubber sheet or oil cloth over it, over that a sterile sheet with the buttocks resting on a Kelly pad. It is almost a pleasure to attend a case with the room and facilities in good shape, and if one is called upon to do a pubiotomy, symphysiotomy, or a Cesarean section, it can be done with less risk.

Fourth: As it is impossible sometimes to get these cases to a hospital, the surgeon should have a pretty complete armamentarium so he can operate aseptically and with dispatch. An outfit which I use consists of an electric head-light; leg holders; 1 flask 1000 Cc.

normal salt solution; 2 sterile sheets; 1 doz. sterile towels; 3 doz. small sterile sponges; 1 doz. large; 3 pair dry sterile rubber gloves; 2 rubber aprons; 1 doz. long artery forceps; 4 broad ligament clamps; scissors, long, straight and curved; axis-traction forceps; large uterine dilators, symphysiotomy knife; 2 vaginal retractors with long blades; scalpel; catgut; silk; linen thread; cotton; gauze, plain and iodoform; needles, etc.

With the above facilities and a competent nurse, any major obstetrical operation can be performed very nicely, but always should be done early, before the mother becomes exhausted.

In a recent report of the New York Lying-in Hospital, 41 cases of Cesarean section were performed with a mortality of 6. The six that died were in a badly exhausted state from prolonged labor before being brought to the hospital, therefore the necessity of studying the patient and knowing something about her physical and nervous system before labor begins, so that if the time comes to interfere, you can act quickly. By being more methodical and looking more to the preparation of the patient as we do in other surgical work, there is no reason why obstetrical surgery cannot be kept upon the same high plane attainable by major surgery on other parts of the body.

## A CASE OF SHOULDER PRESENTATION

A description of a case of this obstetrical malpresentation, with associated projecting hand. Delivery of the child by podalic version

By M. F. MOSLEY, M. D., Oak Park, Georgia

I WAS called July 27 to attend Mrs. W. in confinement. This was her sixteenth child. When I arrived at her home, labor pains were quite severe. After sterilizing my hands, I made an examination which revealed a conical bag of waters projecting sharply through a one-third dilated cervix, but could not feel any part of the child presenting.

Taking this as an indication of a complex presentation I proceeded to map out the position of the child by external palpation. The patient being very corpulent and the pains severe, it was impossible to draw any definite conclusions from the external examination, excepting that the head was absent from its usual position above the os pubis.

According to the history of the case the patient had not gone to full term, so I directed my efforts towards preventing the miscarriage, giving her a hypodermic of morphine and atropine, and viburnum. This quieted her a little while but soon the pains returned with greater force and frequency than before.

All efforts to bring her to term proved useless, and knowing that to continue such a course might be to her injury, I decided to let the labor go ahead. On making a second examination I still could not detect any presentation of the fetus. The bag of waters, sharp and protruding, was still not ruptured and I hesitated to interfere as I wanted more dilation. I informed the patient's husband that I might need assistance. I thought it was a face or a shoulder-presentation and I intended to perform cephalic version as soon as there was good dilation and the waters ruptured, which I tried to secure, but failed.

When the bag of waters ruptured, I found it to be a shoulder-presentation with projecting hand and the head lying well up in the right iliac fossa; also the umbilical cord was prolapsed. I tried to push the cord back into the uterus with a catheter and a piece of tape but it would not stay. I requested Mr. W., the patient's husband to send for an assistant and he called Dr. L., who arrived within three hours and about

six hours after I first got to the patient's home. We consulted over the matter and decided that, as the patient had a very roomy pelvis, we would do a podalic version instead of embryotomy as it offered as good a chance to the child as to the mother and as we thought without any risk to the mother. We chloroformed her and after performing version extracted a seven-and-a-half months' fetus, dead from asphyxiation. I do not think it could have lived under the circumstance if it had been born alive.

After extracting the child we irrigated the uterus with mercury bichloride 1 : 3000. She made a speedy recovery.

An excitable woman with a very roomy pelvis was the cause of this unnatural position of the fetus according to my view. Obstetricians have cause for anxiety with a sharp, conical bag of waters with the fetal head absent immediately above the os pubis. On pressing downward above the os pubis one can always feel the head of the child in vertex presentations.

## EXPERIENCES WITH H-M-C ANESTHESIA

Describing a few surgical cases in which it was used with success and satisfaction, including cholecystotomy, removal of lipoma, curettage, appendicitis, cancer and plastic work

By LOCKBURN B. SCOTT, M. D., Winnipeg, Manitoba

HAVING used the hyoscine-morphine-cactin combination in a large number of obstetrical cases with gratifying results, I determined upon its use in surgery, and the following cases where colleagues and myself jointly made use of it are illustrative of the degree of satisfaction obtained.

Case 1. *Colecystotomy*.—Woman, aged 62. Invalid for twenty-two years from frequently repeated gallstone attacks. Operation had been previously refused, but on coming under my care, consent was given. For two or three weeks the patient had been having almost daily paroxysms, and was in a generally enfeebled condition. I gave one full-strength tablet at 7 a. m., repeated the dose at 8:30, operation being intended at 9; but I was unavoidably detained and it was nearly an hour later when the patient went on the table. She was sleeping, but could be roused easily, immediately dropping off to sleep again. We used a few drops of chloroform at intervals during the operation, which lasted an hour. The condition of the patient was most satisfactory throughout, with only slight reduction in the number of respirations; pulse strong and steady. She

remained asleep for four hours after leaving the table and slept well the following night, vomiting slightly only once. Her temperature and pulse were normal for several days following and recovery was uneventful.

Case 2. *Large Lipoma of Right Shoulder*.—I gave one tablet only, the intent being merely to deaden the nervous sensibilities of the patient. We then used local anesthesia and effected removal of the tumor with but slight pain and no shock, although the patient was awake and conversing throughout the operation.

Case 3. *Curettage*.—Two full-strength tablets were used, one and one-half hours apart. The patient was very drowsy, but was aroused and walked from the bed to the operating-table, then went into deep slumber. Respirations were 12 to 14 and very deep; she slept two or three hours after the operation—waking up feeling bright and "perfectly well," with no unpleasant after-effects. We had hard work keeping her in bed as she felt quite equal to ordinary tasks.

Case 4. *Appendicitis*.—Girl aged 15. Patient of hysterical temperament and considerably excited, was given two tablets one and one-half hours apart, with only slight

drowsiness. My colleague, whose patient she was, hesitated about larger dosage, so full anesthesia was produced by chloroform. The operation was somewhat complicated, lasted an hour and a half, during which we used 2 1-2 drams of chloroform. The patient was awake on being transferred to bed and felt bright and happy over the result. Recovery was absolutely uneventful.

Case 5. *Cancer of Breast*.—Woman, aged about 48. We used 2 1-2 tablets, one three hours before operation, the second one and one-half hours later, and a half tablet on going on the table. A few drops of chloroform for the skin incision were given and once or twice after this when muscular contraction occurred. Recovery was uneventful; no unpleasant results.

Case 6. *Plastic Work*.—Woman aged 45, with old-standing cervical laceration and erosion. This was my patient, but for certain reasons I did not wish to operate myself, preferring to act as assistant. Having changed my place of residence, my former colleague was not available; so I asked one of the most eminent surgeons of the city to operate. He had had no experience with hyoscine-morphine-cactin, and only consented to its use on my assumption of all responsibility, the patient decidedly objecting to chloroform or ether.

This patient had opinions of her own and had refrained from food for forty-

eight hours, so was somewhat weak but otherwise in fair condition. I used two tablets, one at 6:30 a. m., the other at 8:15, operation at 9. The patient went soundly asleep shortly after the second dose, with respirations 12, and pulse 84. On the table respirations averaged 5 to 7 per minute.

The operating surgeon and the anesthetist—neither of whom had ever seen H-M-C given before—were uneasy; but as her pulse and color kept good, I refused interference and the operation proceeded, respiration at one time dropping to 4. As complaint had been made of rectal pain, the sphincter was stretched to admit of thorough examination; patient gave no indication of sensation. Not a drop of chloroform was used. After being put to bed she slept three or four hours and was drowsy until next morning. She had two or three slight attacks of nausea, but no other discomfort. Subsequent recovery was rapid and uneventful. Had I this case to repeat I should use one and one-half instead of two tablets, owing to the weakness resultant from lack of nourishment.

The operating surgeon in this case was pleased with the results, except barring the infrequent respiration which alarmed him. It is my intention to continue the use of this agent which has pleased me so greatly in every case in which I have used it.

## ... SURGICAL THERAPEUTICS ...

### HEPATITIS

Inflammation of the liver is not a surgical affection save when it ends in suppuration. But as the province of the surgeon is to prevent as well as cure suppurative conditions the proper treatment of hepatitis may well be considered here. By the term hepatitis is meant the true, acute, inflammatory process which results from the introduction of pathogenic microorganisms through wound or otherwise and not that

condition generally called "chronic hepatitis" which is not an inflammation at all.

The first essential is to secure perfect rest in bed, to which end the application of a huge mustard-plaster aids; or hot clothes may be ordered for the right side, to minimize the pain. Calomel in two-centigram doses (gr. 1-6) every hour until free purgation results is an almost universal treatment now, and it may well be followed by effervescent saline laxative (Abbott's). To check the fever the best drug is aconitine in

doses of two milligrams every hour until the desired result is obtained and then as often as necessary to keep the temperature down. Active kidney secretion must be promoted by the use of potassium citrate, one to four grams (15 to 60 grains) three or four times a day. If the pain is severe, half-decigram doses of codeine sulphate (1-2 to 1 grain) every three or four hours may be given by the mouth.

If in spite of this treatment the trouble go on to the formation of an abscess, as indicated by rigors, subnormal temperature, night-sweats, hectic fever, etc., the pus must be liberated as soon as possible. The liver must be exposed over a considerable area, by cutting away the ribs, usually; and if adhesions have not formed between Glisson's capsule and the parietal peritoneum gauze must be packed between the liver and belly-wall in every direction until the adhesion does take place. In forty-eight hours, without removal of the gauze, the pus may be sought by use of an exploring needle of large size thrust in various directions until the abscess is found; it must then be opened by free incision, wiped out with gauze, thoroughly, and then gently packed with gauze for drainage. It should not be washed out with hydrogen dioxide before the first week of drainage. Subsequently it is to be managed as any other huge abscess which must heal by granulation from the depths. Dysentery is likely to prove troublesome after evacuation; it may be controlled by use of opium, camphor and acetate of lead, a most satisfying prescription being half a decigram of each (3-4 grain) in a capsule every three or four hours.

#### THE CARE OF GAUZE

While it costs more it is best to buy plain, sterilized gauze, as well as bichloride gauze, in one-yard packages for use in minor surgery and for dressing of wounds which must be kept aseptic. For use at operations five-yard rolls in pasteboard boxes (hermetically sealed after sterilization) are best; but if the operation be one of magnitude, such as abdominal section, pieces should be cut

from the roll and boiled at the time of operation. If any part of a roll be left it should be carefully wrapped up in the clean container in which it came and saved for *dressing infected cases*.

The average doctor buys a jar containing five yards of gauze, opens it, cuts off what he needs with scissors taken from an instrument-case or satchel, and says he has used an "aseptic" dressing. This is not true unless the shears be taken out of the sterilizer or boiler, for they have become contaminated in the satchel or case; even letting them lie in alcohol for a few minutes does not insure sterility. After the jar has once been opened and some of the gauze cut off the remainder is not strictly sterile and should never be used as a dressing for a perfectly clean wound. Hence the advice to buy in yard packages for strictly aseptic cases.

A large, clean jar should be kept in every surgeon's dressing-room into which the remains of these yard pieces may be thrown, because some wounds do not require a full yard or full two yards, and these small pieces may be employed for dressing infected wounds. It is really better to have one dry jar and one containing 1 : 2000 corrosive sublimate solution, or 1 : 40 phenol solution, so that one may have constantly at hand both dry and moist gauze for infected wounds. When an operation is performed in a private house the packages should not be opened until the instruments are to be boiled; any left-over gauze may be wrung dry and carried to the office to add to the moist jar; but if the case has been one of bad pus-infection the remaining gauze must be boiled twenty minutes before dropping into the moist jar even though the solution be strongly germicidal. Too much care cannot be exercised in the care of gauze for dressings.

#### THE TREATMENT OF ULCERS

Some ulcers become very chronic, especially those of the legs, dependent upon ruptured varicose veins. When they are irritable, soothing applications are indi-



cated, oxide of zinc ointment being a favorite with many doctors. Others prefer an ointment of carbonate of lead, the lead being rubbed up with linseed oil; but if the ulcerated surface be extensive and granulations not active, lead poisoning may occur. When the ulcer is indolent, various applications have been recommended to promote healing—all with more or less success—generally less; for these ulcers are very hard to heal without operative treatment—at least curettage.

Bismuth benzoate has been much praised to stimulate the healing process; the ulcer being cleansed by use of hydrogen dioxide, or 1:1000 sublimate, or 1:40 carbolic acid, is dried by gently applying absorbent cotton or gauze (better), the surface is dusted freely with the bismuth, covered with dry gauze and cotton held in place by adhesive strips rather than bandage. Some burning follows the application, but this is not severe and subsides in a few minutes. The dressing has to be reapplied every day.

Nitric acid is also used to stimulate these indolent ulcers: 10 to 30 drops to the ounce; and sulphuric acid has been likewise employed. When there is too free discharge gallic-acid ointment (which see) has been lauded for many years. When the granulations are exuberant they may be best burned by application of a piece of blue vitriol—copper sulphate. Occasionally the best treatment is to scrape away all granulations, after injecting cocaine behind the raw surfaces, and disinfect by saturated solution of potassium permanganate, dry the surface with gauze, cover deeply with powdered boric acid, apply gauze wrung from phenol-camphor, protect with oiled silk and put on a Martin bandage over the leg or arm. This dressing must be changed every forty-eight hours for a long time. When all local (nonoperative) measures fail, in persistent leg ulcers the Schede operation should be advised as it frequently gives most brilliant results in cases which have persisted for years. Most careful attention must be paid to building up the general health, if impaired, arsenic being especially

beneficial, but it must be used for a long time.

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### INTERNAL HEMORRHAGE

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From the use of enemas of hot milk remarkable results are claimed by Solt. He advises introduction by means of a piston syringe; the intermittent flow gives better results than a constant stream from a fountain syringe. By this means it is said that hemorrhages from the uterus, bladder, stomach, lungs, and in fact from every part of the body have been checked. In some cases more approved hemostatics had been used for hours without result, and the milk was immediately successful. At least a quart should be given at once, with nothing added but a little salt to make its absorption more rapid. The enema should be repeated in an hour, even if there is no return of the hemorrhage. Of course the usual local measures are employed at the same time, when the source of bleeding can be reached. The method of its action is not certain, but milk contains a large number of substances which are recommended as hemostatics—iron, phosphoric acid, sulphuric and nitric acids, but above all, lime salts. The enzymes and leucocytes also tend to cause an increase in the fibrin ferment. The milk loses its hemostatic power if it is given by the stomach.

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### X-RAY TREATMENT OF CANCER

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One of the best and most impartial observers, Williams of Richmond, after long trial and careful study reaches the conclusion that for superficial malignant growths, unless they have invaded adjacent bones and cartilages, the ray should be used because when rightly applied the result is so uniformly successful. Its application is painless, there is less scar and deformity and a recurrence is in proportion to the thoroughness of the treatment. Carcinomas on the lip or connected with any mucous membrane should be excised, because for some reason they seem to be especially resistant to the ray.

For malignant growths of the deeper structures, including the breast, radical surgical procedure should be recommended, always. It is but rational that the surgical operation should be followed by sufficient exposures to the ray to destroy malignant cells that have been left. It is possible to destroy such cells an inch or two from the surface, and the patient should have every possible chance to have the malignant cells completely eradicated or destroyed. Recurrent growths of the breast often yield readily to x-ray treatment because the recurrence is so near the surface. The prognosis in these cases depends on whether the neighboring glands or the thoracic cavity are invaded. Morton, of New York, recently said that his opinion of the status of the x-ray is that it is at a period of partial therapeutic eclipse by reason of being abused by ignorant workers. Many doctors think that all they have to do is to buy a machine and administer the x-ray to get cures. As to the particular radiation that comes out of a tube, he believes in the therapy of a high-vacuum tube, 7 to 12 inches alternating spark, because we have to deal not with deep lesions only, but intermediate lesions, as well as superficial. A tube that gives no yellow color whatever is the safest; it obliterates the chance of injury to the patient and gives the best therapeutic effect.

#### TUBERCULOSIS OF CECUM

A condition distinctly surgical (because curable by operative treatment), long unrecognized, is cecal tuberculosis. In the diagnosis the chief difficulty lies between tubercle and cancer, as in the beginning tuberculosis presents the same functional signs as carcinoma of the organ, namely, intestinal disturbances with alternating diarrhea and constipation, violent colics, sometimes with vomiting and abdominal pains which are at first indistinct, but later become localized in the right iliac fossa. Blood in the feces rarely occurs in tuberculosis of the cecum. Later tuberculosis presents a tumor in the right iliac fossa, but the lymphatics of

the mesentery become enlarged much more rapidly and more extensively than in carcinoma. Consideration must be given to the duration of the symptoms, to the presence of other tuberculous lesions, and to the age of the patient, since before forty tuberculosis is more likely to occur than cancer. As to treatment excision of the growth and glands gives a good chance of recovery.

#### ENEMA AFTER ABDOMINAL SECTION

After abdominal section cathartics cannot be given by the mouth on account of nausea. In such cases when it is desirable to secure bowel-movement the following enema, high into the rectum, may be given:

Epsom salt, 50-percent sol. ozs. 2  
 Oil of turpentine.....ozs. 2  
 Glycerin .....ozs. 2  
 Water .....ozs. 6

The injection is to be held in the bowel as long as possible by the patient. It is well to anoint the inner surface of the thighs and the buttocks in order to prevent irritation of the parts should they come in contact with the turpentine, by any mischance.

#### CURE OF NEVUS BY X-RAY

Some remarkable cures of nevus by the use of the Roentgen-ray are being reported, some of the great cases being those in which punctate cauterization and electrolysis had both failed. From ten to twenty séances of ten minutes each are required, using a high tube at about six inches, healthy surfaces being protected by lead-foil.

#### FOWLER'S POSITION IN ABDOMINAL SEPSIS

A great many patients are being kept in a most uncomfortable position by those who are following a "fad" without any thought as to the reason therefor, viz., Fowler's position. This is the placing of a patient in the semierect posture (at an angle of 45 degrees or less) and maintaining him there by means of supports and pillows. By this

means, in septic abdominal cases, the septic fluids from the absorbent and dangerous area of the diaphragm and upper abdomen are drained to the less absorbent and safer area of the pelvis and allowed to escape by a large suprapubic drain which passes to the bottom of the pelvis; or through the vagina in women. The employment of this position constitutes an important advance in the treatment of septic peritonitis,

during the first few hours. But it is useless after excessive drainage ceases. It must be remembered that within a few hours the omentum or adherent coils of gut will have completely shut off the upper part of the abdomen and thereafter all that comes away is from the pelvis and the drainage-canal. Usually maintenance for thirty-six hours of the Fowler position is amply sufficient.

## GYNECOLOGICAL THERAPEUTICS

### HYSTERIA OF THE MENOPAUSE

About the time of the climacteric some women are troubled by certain nervous symptoms which have been named "hysteria of midlife" by some writers. These patients suffer from distressing fulness in the head with alarming fluttering of the heart, "sinking spells" on severe exertion, "hot and cold flashes," and a peculiar headache limited to a small spot on top of the head. Most of these patients will be found on blood-examination to have deficiency of hemoglobin; to these large doses of tincture of the chloride of iron should be given: ten drops an hour after each meal; with a laxative at bedtime. It must be remembered, however, that some persons cannot take iron even in the most infinitesimal dosage: a glass of the mildest ferruginous spring-water giving them a sensation of fulness and pain in the head and interfering seriously with indigestion. When such are met, codeine, bromides, belladonna, etc., may be tried instead, with forced feeding and outdoor life.

### "NERVOUS IRRITATION" IN WOMEN

There is a group of symptoms, ascribed by some neurologists to "spinal anemia," for which the average gynecologist wants to curet or use "local applications" or tampons. Both are wrong. The woman is usually resident in a large town or city;

she becomes highly nervous and irritable, especially at the menstrual period, with vague pains in the ovarian region and back; complains of great despondency, or even dreams of suicide, is annoyed by her children and distressed by noises; her sleep is broken and troubled; her mind rambles and she fears insanity. This woman needs no nerve-specialist, nor a gynecologist; she is merely suffering from too intense nervous strain, aggravated sometimes by some grief, worry, anxiety, overwork, deficient sleep, imperfect hours or failure to perform the sexual act properly. A few good doses of potassium bromide will completely relieve her provided the immediate source of irritation be removed, as by change of surroundings for a few days. "Going home to mother" for a little visit will do more good than all the curets and pessaries ever made; and a few doses of bromide will do the rest.

### PROLAPSED OVARIES

There is no way of curing prolapsus of the ovary except by suspension; but the suffering may be greatly ameliorated by proper treatment. In the first place, an ovary merely displaced downward but not adherent may be pushed up out of Douglas's cul-de-sac by having the woman assume the knee-chest position. If tampons or an Albert Smith retroversion pessary be introduced while this position is maintained the retention of the retrodisplaced uterus in

proper position will keep the ovary up out of harm's way; but only temporary relief—not cure—may be obtained in this way. The ovary which is adherent in the cul-de-sac should be liberated only by abdominal section. An ovary so slightly prolapsed as only to be felt easily in the vaginal vault should be left alone unless very tender and enlarged; but a moderately displaced ovary, tender yet not enlarged, may be cured by nonsurgical means, though in many instances, perhaps the majority, relapse occurs after so-called cures and later an operation is required. The proper treatment is to paint the roof of the vagina with iodine once a week, using ichthyol-glycerin tampons (10 percent) every evening and a warm douche at morning. It should always be remembered, however, that a badly prolapsed ovary, more or less painful and enlarged, is a diseased ovary and is never cured except by resection or extirpation.

#### TREATMENT OF VAGINAL HYSTERCETOMY

When the clamps are used (which is now but rarely) the patient must be catheterized every six hours until the instruments are removed. It is generally safe to unlock the clamps at the end of thirty-six hours, and to remove them, with gentleness, at the end of forty-eight. The packing should not be disturbed. When ligatures have been used, the catheter may or may not be needed for two days—according to the amount of possible injury to the bladder walls. Its use must not be continued longer than two days on account of the danger of causing persistent irritable bladder. The packing must not be removed before the sixth day, and usually it is better left until the seventh, in spite of the fact that the smell is exceedingly disagreeable after the fourth or fifth day; if the stink is too great a little of the outer portion may be cut away and fresh gauze inserted in the folds of the labia. On removal of packing a douche must be given; and it should be repeated twice daily for a week and then once a day for two or three weeks. The bowels should be moved on

the second day if possible, by saline. The woman may safely sit upon a commode for bowel-movement by the sixth day. She may be permitted to lie upon her side the third night. If everything progress well she may sit up in bed on the tenth day, and in a chair on the twelfth; and may walk a little at the end of two weeks.

#### PRURITUS VULVÆ

Itching of the vulva, especially in pregnancy, may become so bad as to cause sleeplessness, loss of appetite and flesh and great mental irritability. In cases of such severity the patient should not be left to carry out the treatment herself but the doctor himself should at once practice Ruge's antiseptic toilet of the vulva: The vulva, vagina and cervix are thoroughly washed with soap, all folds and creases in the mucosa being opened up; then the vagina is freely washed out with a weak sublimate solution, at least sixteen pints being used. This process lasts a quarter of an hour. One treatment usually definitely cures the patient, but Ruge usually performs the "toilet" two or three times, and applies to the vulva each sitting an ointment of carbolized vaseline. While there may be a purely nervous pruritus, the satisfactory effects of Ruge's treatment seem to show that, even in pregnancy where no objective local symptoms are present, the disease is often due to bacteria. For the less serious cases of pruritus vulvae, Skene advises:

Acidi salicylici ..... 5.0

Lanolini ..... 99.0

Misce et ft. ungt. Sig.: Apply three or four times daily.

#### 'SYPHILITIC METRORRHAGIA

That syphilis may be a cause of uterine hemorrhage is not sufficiently emphasized by the textbooks. Muratow says that the condition of the uterus is similar to that found in syphilitic affections of the stomach in which hemorrhage occurs. Here the mucous membrane is affected, and especially the blood-vessels, and erosions and ulcera-

tions of the surface occur and allow hemorrhage. There are no specific symptoms of such metrorrhagia, there being no cachexia and the uterus being an organ from which bleeding is easily tolerated. Such bleeding has been observed in young maidens, the subjects of inherited syphilis, and in the puerperal state in women who suffer from syphilis. Hemophilia has even been suspected, so profuse and persistent was the bleeding. Cystic ovaritis has resulted in some cases. In all cases of obstinate bleeding from the uterus without clear etiological elements it is desirable to inquire carefully for a history of syphilis in the patient, her husband, or her parents, and make use of syphilitic treatment before giving up to the treatment of the case to operative procedure. Most of these patients have gone the rounds of specialists and had all sorts of treatment without any benefit, but are promptly relieved by mercury and iodides.

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#### ATONIC AMENORRHEA

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Amenorrhea due to deficient supply of blood—atonic, as it is called by some—may be greatly benefited by the use of syrup of iodide of iron (syrupus ferri iodidi, U. S. P.). It is best administered in doses of 1 Cc. (fifteen minims), one hour after each meal rather than at meal-time, when the iron is apt to unite with the tannic acid of the tea or coffee drunk and thus form ink, which is of no value, since tannate of iron is insoluble.

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#### PROCIDENTIA UTERI

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In the majority of cases of extreme prolapsus there is almost total absence of the pelvic floor although the skin of the perineum may never have been badly torn; and in a large proportion of cases there is a laceration of the cervix also—which was perhaps in great measure the primary cause of the prolapse, leading to subinvolution and retroversion at first and to complete procidentia later in life, both gravity and intraabdominal pressure adding to the downward displacement. The operative treatment must

not, however, be determined by the cause but by the pathological conditions present. If the uterus is small and not ulcerated it may be returned and kept in fairly good position by an anterior colporrhaphy and a very tight perineorrhaphy; but as in a large majority of bad cases such an operation will prove of only temporary benefit, it is far better to make a small opening in the abdominal wall and make ventral fixation in patients past the menopause (and tightening of the broad ligament in women under 40), carefully scarifying the whole fundus so as to get plenty of surface adhesion, chromicized catgut being preferable for sutures. If the uterus is immensely elongated—some uteri measure as much as seven or eight inches in depth—it is perhaps best to make a very high amputation and greatly narrow the vaginal outlet. Finally, if the uterus be very large or very greatly ulcerated, vaginal hysterectomy with immediate anterior colporrhaphy (to support the displaced bladder) and close perineorrhaphy will be found to be the most effective mode of treatment.

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#### CRESOL AS A VAGINAL DOUCHE

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A preparation much employed for douching the vagina in gonorrhea, leucorrhea, etc., and for vesical irrigation is the compound solution of cresol (liquor cresolis compositus, U. S. P.) which is a combination of fifty percent cresol, linseed oil, potassium hydroxide and water. It is a superior disinfectant and antiseptic when used in a one-to five-percent solution in warm water. It is also largely used for sterilizing surgical instruments.

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#### BONE-SOFTENING OF LACTATION

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No combination of drugs seems to do as much good in this peculiar condition as the compound syrup of hypophosphites. There is no need now of prescribing any proprietary article in order to get a good formula, as the United States Pharmacopeia now gives one containing calcium hypophosphite, potassium hypophosphite, manganese hypophosphite, quinine, strychnine, sodium citrate,

sodium hypophosphite, ferric hypophosphite, diluted hypophosphorous acid, sugar and water. The official name is *syrupus hypophosphitum compositus*. The average dose is 8 Cc. (two fluidrams: a dessert-spoonful) three times a day.

#### FOR UTERINE COLIC

A very popular prescription for uterine and ovarian pain is the *tinctura viburni opuli* comp. of the National Formulary, in dose of 4 Cc. (one dram) every three or four hours, and later thrice daily. It contains no opiate, its constituents being *viburnum*

*num opulus*, *dioscorea*, scull-cap, cloves, cinnamon, glycerin, alcohol and water. This preparation has been designed to take the place of the much advertised "*viburnum compounds*." The amount of alcohol present is not sufficient to alarm even a teetotaler.

#### FOR CHLOROSIS

A remedy much employed for chlorosis is the syrup of ferrous iodide: *syrupus ferri iodidi* of the United States Pharmacopeia. The average dose is 1 Cc. (fifteen drops), preferably about one hour after each meal.

## GENITOURINARY THERAPEUTICS

### THE IDEAL TREATMENT OF GONORRHEA

Every physician reads with avidity articles that deal with "ideal" or "successful" treatments. They will be disappointed in reading this article, for while the treatment referred to here would be ideal, it is not a feasible one. In 1904, Dr. Burnside Foster of St. Paul suggested that the ideal, but of course fanciful, treatment of acute gonorrhea would be a button-hole in the perineal urethra which would serve to divert the urine from the inflamed anterior urethra and also would enable a much more efficient local treatment to be applied to the anterior urethra which, as we know is at first the only portion involved in the gonorrheal inflammation. He did not recommend the treatment as justifiable, but by accident he was enabled to treat gonorrhea by this method, three times in the same individual.

The case is so interesting that we think it is worth while to mention it here for the readers of *CLINICAL MEDICINE*. A Mr. B. P., aged 60, widower, first came under the author's observation in 1898 with a chancre followed by constitutional syphilis which ran a typical course. Although the patient was quite dissipated and was very irregular in

his treatment, he reported from time to time for observation, and remained under care and treatment for two full years, at the end of which time there was no evidence of the disease. The patient was not seen again until June, 1901, when he was found to have an ulcerated condition of the penis just in front of the penoscrotal angle, which he said had existed for about a month. This was evidently an ulcerating gumma which finally healed under large doses of iodide of potassium, but before healing it destroyed a portion of the floor of the urethra, leaving a hypospadias with an opening as large as an ordinary lead pencil into the urethra. About three years later, October 1903, the patient again appeared, this time with an acute gonorrhea involving the anterior urethra. The gonorrhea was of 4 days' duration and there was a profuse discharge with abundant gonococci. Here was a unique opportunity to try the so-called "ideal" treatment for gonorrhea.

The patient could urinate through the posterior opening and the inflamed portion of the urethra could be readily treated locally and completely isolated from the portion not involved. The anterior urethra was washed from behind forward with a 2-per cent solution of protargol, swabbed out with

the same solution of 10-percent strength, and packed tightly with iodoform gauze, repeating the process twice daily for four days. At the end of the fourth day there was but very little discharge and very few gonococci could be found. Four days later there was no discharge, and the patient had no further trouble.

About a year later this same patient again contracted gonorrhea and the same treatment was followed by exactly the same result. In December, 1906, the patient again contracted gonorrhea so that for the third time an opportunity was had of treating him in the same way. The last time instead of protargol a 1 to 500 solution of silver nitrate was used, followed by iodoform gauze packing. The disease was entirely cured in seven days.

This experience would seem to show that if we could confine a gonorrheal infection to the anterior urethra and keep the urine from flowing over the inflamed surface and could keep the two surfaces of the urethra apart by means of packing, any efficient antiseptic treatment would destroy the gonococci before they had time to penetrate into the deeper layers of the mucous membrane, and would speedily cure the disease.

#### THE DAMAGE FREQUENTLY CAUSED BY GONORRHEAL INJECTIONS

It has long been recognized by genitourinary surgeons that the treatment of gonorrhea by injections is contrary to the rules of a true surgical technic. We remember Prof. Lassar saying many times that gonorrhea is the only disease in which we drive the germs in instead of driving them out. And we believe it is a great mistake to give posterior injections or even bladder irrigations so long as the gonorrheal process is limited to the anterior portion of the urethral canal. It is wrong to force open the cut-off muscle which serves as a wall between the anterior and posterior urethra so long as we are sure that the posterior segment is not affected. We have seen numerous cases in which we believe that the extension of the gonorrheal process

from the anterior to the posterior urethra was caused directly by the injections. Of course we can never be sure of such a thing. There is always a possibility of believing that the extension of the process would have taken place any way, but two cases that have recently come under our notice seem to leave little doubt of the fact that the mischief was caused directly by the injections.

The first case was that of a drummer, a young man of twenty-four, who became infected with a typical first gonorrhea. All the symptoms pointed to the fact that the process was limited to the anterior portion. I treated him by internal antiblennorrhagics and by protargol injections, using about two drams of a 1-2-percent solution with each injection. At the end of four weeks this man was practically cured. The discharge was very scanty, there were no shreds in the urine and gonococci were practically absent. The man at that time had to leave New York. I told him that while he was practically cured, he was not quite cured and advised him that it would be best for him to be under a physician's care for another week or two, until the cure would be absolute. A physician whom he saw in Buffalo gave him a silver-nitrate injection and immediately following the injection all the symptoms of the case became aggravated, the discharge of course increased and urination became painful. He had symptoms of acute prostatitis and in another week he was laid up with epididymitis. When he came back to New York six weeks later the case was a very bad one and it took three months of very careful and anxious treatment before I was able to bring him to the stage in which he was when he left me nearly five months previously.

In my opinion there can be no doubt that in this case the extension of the disease was caused directly by the strong and apparently abundant silver-nitrate injection which drove the gonococci posteriorly and gave them a favorable (inflamed) soil for development.

I will state here in passing that while nitrate of silver in proper strength, used in chronic cases of posterior urethritis is of

great, sometimes of remarkable benefit, this drug is responsible for many damaged urethras. It is unfortunately only too often used unscientifically and in acute conditions where it only adds fuel to the fire.

The second case was in its essential features, that is, in the results following, similar to the first, only here the patient, impatient to expedite the cure of his disease, took it upon his own responsibility to administer himself an injection. The results were such that he became convinced that he who doctors himself very frequently has a fool for a patient. Instead of expediting his cure he retarded it by at least six months.

The proper treatment of gonorrhea by injections would be from behind forward and not from before backward. But the anatomical structure of the genitourinary organs unfortunately does not permit of such a procedure.

#### THE PREVENTION OF SYPHILIS

Many earnest men are engaged in the search for a prophylactic of one of the greatest curses of humanity, syphilis. Metchnikoff and his associates of the Pasteur Institute, Roux and Salmon, are devoting a great amount of time and energy to this work. It seems as if their efforts are about to be crowned with success. The calomel ointment of which we spoke in a previous issue of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* has been improved now by Metchnikoff and has the following composition: Calomel 33 parts, lanolin 67 parts, and petrolatum 10 parts.

Numerous experiments on monkeys, also one experiment on a human being, seem to show conclusively that when the salve is rubbed in within a few hours after infection syphilis fails to develop. But another important discovery has recently been made by Metchnikoff. He and his coworkers have discovered that if arsenic-acid-anilid (atoxyl) is injected within *fifteen days* after inoculation syphilis will fail to develop! This has been demonstrated over and over again by experiments on the macacus (species of monkey close to the genus homo).

Metchnikoff thinks that the prophylaxis of syphilis is now a comparatively easy matter and many European physicians seem to ascribe great importance to his discovery. But we prefer to await further developments and further reports by other observers before pronouncing a definite opinion. Should, however, numerous reports from careful observers corroborate the correctness of Metchnikoff's claims, his name will be truly immortal and he will have deserved the right to be called one of the greatest benefactors of the human race.

#### ABORTION OF GONORRHEA

The method of Motz, slightly modified, consists of irrigation of the anterior urethra (only) with a warm permanganate of potassium solution, wine-colored, temperature 38° C., using a double current nozzle, after which there is introduced into the urethra by means of a small syringe the following:

Hermophenyl .....	0.25 to 1.0
Protargol .....	0.25 to 2.0
Glycerini .....	10.00 to 30.0
Aquæ q. s. ad.....	1000

This solution is left in contact with the urethra from one-fourth to two hours.

#### ARBUTIN IN DISEASES OF THE BLADDER

In a recent article Prof. W. F. Waugh says: Arbutin soothes irritability of the bladder, relieves catarrh, and gradually induces a return of the mucosa to normal conditions; restrains the excretion of albumin, and clears the urine of microorganisms. No other remedy exerts such control over gonorrheal disease of the bladder, especially when chronic. Arbutin is very slow of action, and the improvement it induces is manifested as it is taken from month to month. Many old cases of gonorrheal disease, usually considered incurable, have slowly subsided under its influence, until, within three, six or twelve months, they are cured. A similar slow, but sure, action may be witnessed in cases of albuminuria, the discharge lessening until it ceases.





# GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



## THERAPEUTIC INDICATIONS OF QUASSIN

The physiologic action of this "prince of bitters" and some of the conditions in which it gives the most strikingly beneficial results

**Q**UASSIN is the active principle of the quassias whose principal commercial varieties are quassia amara, quassia excelsa and quassia simaruba. These three varieties belong to the Simarubeæ group and the family of Rubaceæ. For a long time quassia amara was the only one employed and was known by the name of the bitter-wood of Surinam.

Trommsdorff made an analysis of this plant in 1835 and announced the presence of an amorphous bitter principle. To this Thompson gave the name quassin. From this body Winckler obtained the crystalline form and classed it with the alkaloids. Quassin therefore exists in two distinct states, the amorphous and the crystallized, and it was so demonstrated by Adrian, Moreau and Duquesnel. The amorphous quassin is about ten times less active than the crystallized. This however is not a practical objection with respect to dose, since even in the larger quantity required it is not too inconvenient, the difference being only that between one centigram and one milligram (gr. 1-6 and gr. 1-67). A more serious objection to the amorphous quassin is its variability, owing to the varying proportions of impurities contained.

Crystallized quassin has none of these inconveniences. It is a pure substance, perfectly definite and identical in composition,

always having the same action. Crystallized quassin therefore should be preferred for clinical purposes. Crystalline quassin is prismatic, white, opaque, silky, of micaceous glitter, and permanent in the air. It is inodorous and of very bitter taste, very soluble in absolute alcohol and chloroform, less so in water, and not at all in ether.

*Physiologic Action.*—Quassin does not act directly on the assimilation but acts by stimulating the appetite and digestion, and in this manner improves nutrition through the quantity and quality of the food-elements absorbed. This action of quassin is of great importance. The immediate effect following the ingestion of quassin is an increase of salivary secretion, which however preserves its normal composition. This effect very soon is followed by an imperative desire for food which it is best to satisfy at once if we are to avoid the sensation of pain in the stomach together with acid regurgitation and even a sense of exhaustion sure to follow if this demand is not satisfied.

Quassin increases the formation of ptyalin, or animal diastase, which is so necessary for the digestion of starchy matters. This ptylin does not exist in the saliva which flows from the Stenson and Wharton ducts, but originates from the buccal mucous surface by a change of the salivary product on coming in contact with the air. The saliva

of the glands and of the secreting ducts is therefore inactive, not ready for transforming starchy substances into glucose, while the mixed saliva which flows about in the mouth determines this chemical decomposition of the starches at once. From this it follows that the physiologic rôle which the saliva plays in the digestion is an important one and that the action of quassin is a powerful factor in the first phase of that process. The action of quassin extends from one end of the digestive tube to the other. Its action is that of a pure bitters, that is, one which stimulates all the secretions of the intestinal tube, salivary, gastric and intestinal. This primary action is accompanied by a tonic action on the muscular fibers of the organs concerned.

This physiologic action on the secretions of the digestive tube is of considerable importance clinically. The appetite is aroused, digestion improves and is more complete, and intestinal stasis is obviated by improved peristalsis. These results are due to the fact that quassin does not render the secretions more abundant at the expense of quality, but while increasing their volume, preserves their normal quality and composition. It is therefore perfectly natural that it does not only sharpen the appetite but also facilitates the primary and secondary digestion and prevents constipation.

Quassin stimulates the liver, as it does all other glands of the digestive tract, augmenting its normal secretion and so contributing its share to the assimilation of the ingested food. In the same way quassin acts on the pancreas, this also resulting favorably to nutrition. Moreover, this action of quassin on the liver facilitates the expulsion of a biliary calculus in hepatic colic, while by increasing the flow of bile it tends to diminish the size of the liver in biliary congestion.

Quassin augments the amount of urine to double and treble its normal quantity, and to this action is joined increased muscular tonicity of the urinary apparatus, which is a corollary to the tonic action on the intestinal muscular fibers. Under the influence of quassin the expulsive muscles of the urinary apparatus are stimulated promptly and en-

ergetically. This augmentation of the urine and the tonicity of the expulsive muscular fibers makes of quassin a useful remedy in nephritic colic the same way as in hepatic colic.

Campardon speaks of quassin as capable of stimulating the lacteal secretion in nursing women. The action of quassin on the intestinal muscular fibers makes it valuable in combating the formation of gases in the intestines and the resulting disagreeable borborygmi. The same action of quassin makes it useful in the nervous vomiting of pregnancy. Quassia decoction and quassin act destructively on the parasites, such as the ascarides, lumbricoids and oxyures. In a word, quassin localizes its action in the digestive canal and is indicated in a great number of affections which here have their seat.

In digestive troubles the question is nearly always about errors of diet. In these sins against hygiene every individual digestive tube reacts in its own way, according to the importance and nature of the present alimentary error, the previous vigor of the subject and the condition of his nervous system. In the initial state the noxious action keeps up an exaggerated reaction, a general hyperfunctionating of the digestive tube. This hypersthenic period is owing above all things to the diet, and in fact comprises those dyspepsias that are most easily cured. But in an advanced stage, and sometimes even at the beginning, the digestive forces stagger at the task imposed upon them. There supervenes a gastrointestinal hyposthenia, hypochlorhydria, hypopepsia, abnormal dilations and fermentations, then intestinal atony, flatulence and ptoses mark the localized or less incapacity of the digestive system to elaborate the material presented. At first a limited allowance of the alimentation may parry this general deficiency, but a little further on such underfeeding can not be safely kept up with organs overworked.

But whatever the diversity of symptoms may be in all these affections they all have one common bond. The digestive canal appears from beginning to end as one mass of glands which secrete the juices needed for

digestion under the continuous influence of muscular contractions which keeps up the secretion. Thus is gastrointestinal hyposthenia at the base of nearly all dyspepsias, characterized on the one hand by debility, distension, feebleness of the musculature of the digestive tube, and on the other hand by insufficient secretions of the glands, a relative or absolute acrinia.

This state of things may be preceded by a period of muscular spasm and glandular perversion of action corresponding to the reactionary condition. It may be followed by an inflammatory and infectious period of the mucosæ, which may be grave and final. But the period of muscular atony and hypocrinia comprises the great majority of dyspepsias that come under medical treatment.

The above conception of the subject has the advantage of simplifying the therapeutics or rather of precisising the indications to be fulfilled.

Gastrointestinal hyposthenia demands evidently severe dietetic treatment. There may be a demand for various prescriptions according to phenomena peculiar to certain localities of the canal, but there are always two grand indications dominating here therapeutic effort: tonify the musculature, stimulate the glands—favor peristalsis and the gastrointestinal juices.

What influence can we exert over the smooth muscular fibers of stomach and bowels—have we any agent capable of stimulating the glandular secretion? Yes!

It is enough to remember the very particular action of quassin in this respect. There is no medicament that has such a direct and marked effect upon the peristaltic contraction of the smooth muscular fibers of the digestive primæ viæ. There are purgative and cathartic agents which affect the lower portions of the intestines whose action is purely that of unloading, and they operate where the glands are rare. Quassin on the contrary stirs up the contractions of the stomach and of the small intestines, and this is always accompanied by a noticeable hypersecretion of all the glands. Is this second action independent of the first or is the augmentation of the secretions a simple result of the

more vigorous peristaltic action? Practically the point is of little importance, and yet this secretory power of quassin is so marked, extending as it does to all glands, (including both the salivary and intestinal glands) that the tendency is to attribute this secretory property to its having a particular action on the glandular elements.

And thus quassin fulfills perfectly the two indications of gastrointestinal hyposthenia. It is not necessary now to seek further for the reason that quassia wood, in years gone by, had such popularity in the treatment of dyspepsias.

Quassin associated with proper dietetic treatment gives remarkably effective results in all those cases which we call gastrointestinal hyposthenia, anorexia, gastroectasis hypochlorhydria, atonic dyspepsia, flatulencies, enterocolitis, constipation and diarrhea from intestinal inertia, biliary stasis, splanchnoptosis, etc.—(A. Houdé's *Revue Therapeutique des Alcaloides*, December, 1907.)

#### A FRUITARIAN DIET

This may be explained to the uninitiated to consist of the fruits of trees like apples, oranges, bananas and olives, the fruit of the bushes like currants and raspberries, the fruits of plants like strawberries and melons, lentils, beans and cucumbers, the fruits of grasses like wheat, barley, maize and oats, the fruits of nut trees as the filbert up to the coconut, together with some earth fruits like potatoes and a modicum of vegetables and salads. To these may be added butter, milk, cheese and honey, although their production is not so free from risk of contamination and animal infection as in the case with the products of the vegetable kingdom and the world of fruits.—(*The Indian Lancet*, Dec. 2, 1907.)

#### SUDDEN DEATH OF NEWLY BORN INFANTS

Attention lately has again been directed to the sudden death of infants newly born, and in some cases due to chloroform anesthesia. The parents were incriminated in

the first and the impurity of the anesthetic in the latter cases. Dr. R. Robinson's researches on the cadaver showed the death to have been the consequence of a pathological congenital hypertrophy of the thymus gland. Dr. Robinson's experience allows him to affirm that the sudden death in these cases is the result of a paralysis of the diaphragm (respiratory syncope) followed by paralysis of the pneumogastric and its cardiac branches (cardiac syncope—chloroform) and subdivisions. There is a great chain which surrounds the partition between thorax and abdomen and which has the control over the life and death of the individual being.—(*Gazette des Hôpitaux*, 1907, p. 1621.)

#### PERONINE

This is an opium derivative. It is the hydrochloride of benzyl-morphine, forming a white, bitter powder, soluble with great difficulty in water. It is given internally as a sedative for cough, standing between morphine and codeine. It is less available as a nerve sedative or hypnotic. It is given in doses of one to three centigrams (0.01 to 0.03) three to four times a day in pills or tablets. It was tried in eye-diseases but found unsuitable.—("Enzyklopadie der Praktischen Medizin.")

#### THE LATE ERNST VON BERGMANN

Dr. Carl Beck of the New York Post-Graduate Medical School, who was a pupil of that great surgeon, delivered a memorial address on his teacher before the Medizinische Gesellschaft of the State of New York on May 6. That address beautifully portrayed the great surgeon as a man among men, and admirably too did the man, Carl Beck, absolve his noble subject. The absorption of our great professionals in their respective practices too often absorbs the man in them that there is nothing left for the survivors to remember them by, the noblest quality of being man among men. So was not Bergmann great though he was as a surgeon among the great surgeons of the present time. He died from the effects

of an operation for intestinal stenosis. He was the son of a Livonia (Russia) pastor, and the savor of a pious Christian home went with him through life and did not leave him when he submitted himself to the surgeon's knife. In loud and measured tones he spoke those beautiful lines from the "Lauda Sion Salvatorem."

"So nimm denn meine Haende  
Und fuehre mich  
Bis an mein selig Ende  
Und ewiglich.  
Ich will allein nicht gehn  
Nicht einen Schritt,  
Wo du wirst gehn und stehn  
Da nimm mich mit."

#### CALCIUM CHLORIDE IN URTICARIA

Doctor Netter last year reported the happy results which the salts of calcium gave him in the treatment of urticaria. This treatment was used successfully by Wright in 1896 but became forgotten, and it deserves to be revived. The same treatment may be given in cases of acute edema, chilblains and pruritus.

Wright was led to this medication by thinking of the etiologic conditions of certain urticarias, such as acid fruits, serum injections and soap enemas, all conditions in which substances intervene which render the blood less coagulable by depriving it of calcium salts and rendering them immobile. Wright moreover established the fact that in certain patients in whom urticaria disappeared the blood regained its coagulability and its normal percentage of calcium. He found a direct relation subsisting between the diminution of blood coagulability and the appearance of urticaria. The mechanism is no doubt far more complicated, and this is quite natural when we consider the rôle of the calcium ions in the large number of functions both of the cells and the organism. It is proper here to call to mind the modifying part calcium plays in the nervous system and of the remarkable experiences of Loeb which established cutaneous hyperesthesia on the application of the citrate and oxalate of sodium.—(*Gazette des Hôpitaux*, 1907, p. 391.)



## DEATHS FROM ANESTHETICS

A record of some of the deaths and accidents accompanying the use of different anesthetics, notably chloroform and ether, with precautions concerning their use

ANYONE who has followed the press with some attention for the last few months must have noticed the large number of accidents which have attended the use of the older, volatile anesthetics, chloroform and ether, as well as some of the new ones. This is the more interesting and unexpected because our surgeons and medical teachers are constantly urging more care in the administration of these powerful agents and the necessity of having them given by trained anesthetists.

For instance, Dr. John B. Roberts, in discussing the anesthesia peril before the Philadelphia County Medical Society, expressed his surprise that deaths from anesthesia are not more frequent and suggested the anesthetist should be the most skilful of the surgeon's assistants; he urged the development of anesthetic specialists.

*The Journal of the Minnesota State Medical Association* joins in the demand for professional anesthetists. An excellent editorial in its January number contains the following significant paragraph: "When we survey the great fields of surgery and the reckless interference practised all over the country, it is amazing that more deaths from anesthetics have not been reported. Suppression of facts and the unscientific and irresponsible causes given for deaths are additional reasons for the unreliability of statistics in general."

*The Lancet-Clinic*, commenting on the verdict which was recently pronounced against a New Hampshire physician, a death having resulted under chloroform in the hands of an unskilled assistant, makes a strong plea for limiting the administration of such anesthetics to those who possess the skill and experience desirable. "Even in obstetric cases from a legal standpoint this may now be considered criminal negligence."

Dr. J. D. Bryant, president of the American Medical Association, says: "The comparatively recent, though limited, introduction of skilled anesthetists into the professional activities of this country has established a desideratum of most satisfactory and beneficent nature to all individually concerned in operative practice."

Judging from these statements it must be a bold man who uses ether and chloroform when compelled to operate without an assistant or other of the advantages enjoyed at the great hospitals, with specially skilled anesthetists in charge, for in spite of all these warnings and provisions for care the death-roll is still alarmingly high.

Here are a few reports that have come to our attention during a few weeks only.

*The Herald*, of Newport, Va., says that a young man nearly died from heart weakness, developing while under the influence of chloroform, administered preparatory to amputating a portion of the toe. The

heart-weakness was unexpected. The boy's heart stopped beating altogether and no pulsation could be detected for fully ten minutes, his entire body turning black. Only heroic treatment by the physician succeeded in saving the boy's life.

*The Dental Digest* for December records four fatalities. One woman in Leavenworth, Kans., died from the fear of pain in the extraction of a tooth. A New York woman died in the dentist's chair; chloroform had been administered, following cocaine. A woman died in the dentist's chair in Chattanooga, from the effects of chloroform and shock following a tooth extraction.

Our press-clipping bureau tells us that a negro in Jackson, Tenn., being placed under an anesthetic, suddenly became demented, escaped into the street, and ran naked through the streets for some blocks, until finally intercepted by an officer.

*The Omaha News* tells of a woman dying in a dentist's chair, where she was being given chloroform for the extraction of twenty-six teeth; while *The Youngstown Telegram* tells of a man dying under similar circumstances.

*The Omaha News*, of December, 6 contains an article stating that a Chinaman, named Ham Pak, died on the table, of chloroform, while undergoing a surgical operation for a traumatism. Evidence was given that the man died from a large dose given while he was struggling furiously against the physicians. This is precisely a condition that is prevented by the H-M-C compound.

*The Chemist and Druggist*, of December 14, records the thirty-eighth death under anesthetics which have occurred in the last few years at Guy's Hospital. In this case the A. C. E. mixture was first used, followed by chloroform. Acetone chloroform was employed.

Dr. L. W. Littig (*Journal of the American Medical Association*) sent a circular letter to all Iowa physicians, inquiring about deaths from anesthetics. He received 800 replies, reporting 63 chloroform fatalities—and all deaths which might be due to other

causes were excluded. Ten of these deaths occurred in dental practice. In the discussion of this paper, Dr. M. L. Harris, trustee of the A. M. A. reported three deaths from chloroform in his own practice.

Dr. Littig's conclusions were: (1) Chloroform is vastly more dangerous than ether, especially in minor work and at the beginning of administration. The chloroform-ether sequence is especially bad. (2) In the class of work mentioned, chloroform is so much more dangerous than ether that its use should be most emphatically condemned, and (quoting H. C. Wood, writing sixteen years ago, or earlier) "the surgeon is not justified in using chloroform, except under certain circumstances and for very definite reasons." (3) Chloroform is especially dangerous in dental work and should not be used. (4) Chloroform is not free from danger in obstetric practice.

*The Cincinnati Enquirer*, for January 3, states that a woman died on the operating table at the Good Samaritan Hospital shortly after chloroform had been administered. The coroner was investigating.

In Washington, D. C., an inoffensive youth was being anesthetized by nitrous oxide for the purpose of having a tooth extracted. He suddenly jumped out of the chair, knocked down two dentists, and was only quelled when his skull had been fractured with an iron hammer. Now, nitrous oxide is considered the safest of all anesthetics. How perfectly providential it would have seemed to some people if this only had occurred under the use of the H-M-C compound. We really pity those people for the lost opportunity.

*The Chemist and Druggist* tells us that the New Zealand House of Representatives is to inquire into the alleged increase of the fatal results from administration of anesthetics. Sir Wm. Ramsey was quoted as saying that anesthetics became impure by exposure to air, and were frequently administered in this decomposed state.

"A friend of mine," says J. D. Bryant, (*Medical Record*), "had occasion to examine the records of an operator who had just then lost a patient from heart-failure with

anesthesia, and found that the last was not the first from the same cause."

Speaking of spinal anesthesia from cocaine, as absolutely inhibitory to shock, McBride says he saw two cases, aged fifty and sixty, so gravely shocked by 8 minims of the 2-percent solution, that all operative procedures had to be abandoned at the time.—*Oklahoma Medical News-Journal*.

Ethyl-chloride anesthesia: In *The Lancet*, Luke estimates this anesthetic has been administered three million times in Great Britain, thirty deaths having thus far been reported from the drug, or one in one hundred and fifty thousand administrations. This shows that ethyl chloride is not so safe an anesthetic as it has been considered.

All recent writers emphasize the care essential in the use of the powerful anesthetics, while many show that their dangers are not limited to the time of administration only. For instance, in a discussion at the meeting of the Brooklyn Pathologic Society Dr. Geo. L. Buist, speaking of sudden death, from the standpoint of the anesthetist, said that it was too common for the comfort of both the surgeon and the anesthetist. One practical point to emphasize was that sudden death was too frequently due to the anesthetic. A prominent surgeon once remarked that if it was not for fear of the anesthetic he would enjoy operating. Dr. Woolsey said: "One should recall that ether is directly an disintegrator of hemoglobin and the possibility of fatal results from this anesthetic has placed anemia of 50 percent of hemoglobin or less in the list of conditions which contraindicate its use as a general anesthetic."

In *The Medical Record*, of December 28, Joseph D. Bryant discusses some unclassified dangers in anesthesia. This is one more of those excellent articles published during the past year which dwell upon the dangers accruing from the use of those old-fashioned anesthetics, that are being so acrimoniously defended of late. That remedies whose administration has been perfected to such an extent should still be attended by so many fatalities, is to be regretted.

Says Alexander, *Illinois Medical Bulletin* Any anesthetics are contraindicated when there is fatty degeneration or dilation of the heart, with acute nephritis or bronchitis, very greatly enlarged tonsils, and chronic alcoholism. The valvular insufficiency is not particularly dangerous so long as the heart-muscles are sound.

Of the cautions necessary, Parrott (*Charlotte Medical Journal*) says: "No patient should be brought to the surgical, or third, stage of chloroform anesthesia under fifteen minutes. I consider it criminal to get them down in a shorter time."

In *The Medical Record*, of January 18, is an article by Robert Rayburn on the "Prevention of Death During Anesthesia by Chloroform and Ether," in which he suggests the following precautions:

(1) Ether or chloroform, drop by drop.

(2) Operate rapidly, diminishing the time of anesthesia.

(3) Invert the patient in case of threatened death, preferably in the prone position.

(4) Have a faradic battery ready.

(5) Use artificial respiration.

The same issue of *The Record* contains an editorial upon the same subject, in which special attention is drawn to the injurious remote after-effects so frequently following chloroform or ether, which are generally overlooked. The editor says it is a mistake to think that the inconveniences of ether and chloroform consist merely in nausea, vomiting, thirst, secretion of mucus, ether-pneumonia, etc.; for the after-effects are more profound, and the opinion is gaining ground that degeneration of the heart, liver, kidneys, etc., has had its starting point in chloroform or ether. It is for this reason, as well as on account of the danger of the fatal issue, that many men have been earnestly working for a substitute for general anesthesia by chloroform or ether. Thus there have been developed local anesthesia, infiltration anesthesia, hyoscine-morphine anesthesia, and spinal anesthesia. The article closes as follows: "It is the duty of every surgeon who has the future as well as the immediate welfare of his patient at heart, to consider the profound mental

narcosis which chloroform or ether anesthesia may produce on the human organism, and so far as possible to select one of the less dangerous methods of inducing anesthesia."

¶ Anesthesia, from its very nature, must be attended with some danger, and for this very reason it behooves every physician to study and investigate means which may minimize its perils and inconveniences. It is because physicians instinctively feel this, looking upon the use of inhalation-anesthesia as in itself an operation involving more or less danger, that they have adopted so readily the hypodermic anesthesia with hyoscine and morphine.

We have given abundant illustrations of this in these columns, but the following clipped from exchanges are of additional interest:

In *The Western Medical Review*, F. E. Wilker contributes some interesting points as to the administration of the H-M-C anesthetic. Dr. Walker states that he now gives the initial tablet one hour and fifteen minutes before the patient is brought to the table, and since adopting this custom he has no difficulty in obtaining sufficient pupillary reflex to be used as an index of the degree of anesthesia. He thinks that with this anesthetic the dangerous point is reached about one hour after the injection. He finds delirium (slight) in less than one percent of his patients. He prevents the annoyance of gas accumulation, following abdominal work, by inserting a rectal tube after every laparotomy, before the patient is removed from the table. This gives the desired relief.

In *The Chironian*, Whitlog analyzes forty-seven cases of H-M-C anesthesia. With one exception all of these were alcoholic subjects, of low vitality, wrecked constitutions. From these unpromising cases he deduced four conclusions: the short stage of excitement, the absence of fear of anesthesia, the small amount of anesthesia required, materially lessening shock, and freedom from postoperative distress, and the pleasing effect on the patient's family and friends.

In *The Medical Councilor*, for October, Dr. H. O. Skinner contributes an interesting paper on "Hyoscine in Obstetric Anesthesia." As to the question of the identity of hyoscine and scopolamine, he says; "Whether the drugs be the same or not, it is manifestly safer, in this country at least, to use hyoscine," and practically, so far as the physician is concerned, that settles the whole question.

*The Western Medical Review*, for December, contains an excellent though brief paper on H-M-C anesthesia by Dr. O. Grothan, of Kearney, Neb. He has used this method in upward of 150 cases, and says that nothing more can be wished for in the way of a safe, reliable anesthetic.

Of course the H-M-C method is not *absolutely* safe. From the very nature of the case no anesthetic can be. But thus far it has proven remarkably free from danger, though it has been used in all sorts of conditions, by all sorts of men, and in all sorts of places. In spite of all this only one death has been reported, that of Van Meter, (and this a doubtful one), although more than three million of the tablets have thus far been sold.

If any of our readers know of further fatalities following its use we shall be under great obligations to them if they will let us know. We want all the truth, and we want to estimate at their true value all the possible dangers.

Undoubtedly the safest possible method of anesthesia is sedation with one or two doses of H-M-C given at proper intervals and under proper conditions, supplemented with enough chloroform or ether, given right. This procedure, scientifically handled, will, unquestionably, rob the operation of practically all its terrors, rendering it as safe as it can be rendered in the light of our present knowledge.

This procedure has now passed the test in an unknown number of operations extending into the millions at the hands of many thousands of operators in the United States, and the above is the consensus of opinion as it has come to us, plus our own judgment in the matter. Those who con-



denn the H-M-C combination as "dangerous" have not we believe, investigated the danger of the older nesthetics. Why not look into it?

W. C. ABBOTT.

Chicago, Ill.

### HYPODERMIC ANESTHESIA: A DOCTOR WHO BELIEVES IN THE "SQUARE DEAL"

DEAR DOCTOR ABBOTT:

I have read the "hyoscine-morphine-cactin anesthesia" article in *The Journal of the American Medical Association* of December 21, last, also your clear and straightforward answer to the same in the January 18 issue of the same journal. As one engaged in the thick of the fight for relieving human suffering and in so far as possible to restore functional activity, I desire to congratulate you on your calling the attention of the medical profession to the beneficent effects that may be derived from the use of the hyoscine-morphine-cactin compound.

Whether you personally discovered any great underlying scientific principle or not is a matter absolutely indifferent to me. You certainly did "carry the news to Garcia" by letting the medical profession know what could be done with this wonderful compound. How long do you suppose it would have taken to find out how these remedies would act on a highly excitable, nervous and suffering parturient woman by feeding them to a healthy bull-dog or maybe to a football player in normal health and good condition? Would hair-splitting and ultrascientific laboratory investigations on animals have furnished the physicians the necessary data on which to base conclusions as to the practical utility of the remedy in the treatment of disease? I believe most practising physicians have been taken in often enough by the highly vaunted "made in Germany" preparations, and even many of those "passed" by the "Council" of the A. M. A., to make them wisely cautious in extensively adopting these remedies before their real utility has been demonstrated by practical experience.

Whatever the experience of others may have been, my own use of the hyoscine-

morphine-cactin compound has been very satisfactory indeed. I have used it in connection with the administration of chloroform in major operations with most gratifying results. Even if not used for the purpose of producing anesthesia, a small dose, say one-half of a standard-sized tablet, or more specifically speaking, gr. 1-8 morphine; gr. 1-200 hyoscine and gr. 1-134 cactin, given fifteen to twenty minutes before the administration of the volatile anesthetic, quiets the nervousness and apprehension, produces a somnolent condition and lessens the amount of chloroform needed to keep up the anesthesia. I have seen no bad results follow its use in any case, but on the contrary, after the operation the patient goes to sleep and is not troubled for probably six or eight hours and in many cases not at all, with the annoying nausea and vomiting so prevalent after ordinary anesthesia.

In obstetrical practice I have found that the small or half-size dose, as above indicated, acts beautifully. Such a dose given to a nervous, irritable woman who cannot or will not keep quiet, will in a short time produce such a degree of ease, comfort and restfulness that is very much appreciated by patient, physician and everyone concerned. In most cases, to accomplish this result, it is not necessary to give large doses. One half-size dose, or in some cases two such doses, will do the work.

But someone may ask, "Since the atropine and hyoscine are chemically identical, why not give the old stand-by morphine and atropine combination instead of the H-M-C compound?" The only answer I have is that the morphine and atropine, even in double-sized doses, will not give the same desirable result as the hyoscine-morphine-cactin compound. And if it is asked why, I have only to say that I do not know, neither do I care. What I am after is good results and the best interests of my patients and it is immaterial to me whether the information necessary to secure such results comes from the high priests of the chemical and physiological laboratories, the "Council", or the men on the "firing line" who are fighting disease in real *human* beings.

In view of the fact that all remedial agents which are to be of any real benefit to humanity must stand this final test of practical application, I am inclined to attach as much, or more, importance to it than to the others. A great deal has been said and a great deal of stress has been laid on the chemical and pharmacological identity of scopolamine and hyoscine. Whether this be true or not is a matter about which I have no opinion to express, but I regard your position in the matter as straightforward and honest and believe that you were telling the medical profession what you believed to be true; in short, that you were giving physicians "a square deal."

If the fact that scopolamine and hyoscine are identical has been known for a long time, the information has been suppressed or at least nothing said about it until a short time ago in the price-list of the leading house handling those drugs. In Merck and Co.'s price-list for July, 1907, we find scopolamine listed at one dollar for a 5-grain bottle, and hyoscine hydrobromide at one dollar and seventy-five cents per 5-grain bottle. If they were chemically and pharmacologically identical, they certainly had not reached the plane of price identity and someone must have been getting the worst of it.

Whether cactin is inert or not, I cannot say, but I do know it has given me good results in many cases of irregular and unsteady heart in *sick* people, and so long as it continues to do that I shall use it, regardless of its effects on healthy men or animals.

So, my Dear Doctor, do not be discouraged. Let the hypercritical theorists and iconoclasts do their appointed work. As long as you furnish us remedies that will help us to relieve suffering and ward off death, we are with you.

E. STUVER, M. D.

Fort Collins, Colo.

#### SOME APPLICATIONS OF THE HYPO- DERMIC ANESTHETIC

Case 1.—M., male, aged 20; trade, brick-mason; slight build, very fair, dark hair and eyes. Never seriously ill except for a very

malignant attack of scarlet-fever, which was followed by a double otitis media, and I think he had a severe nephritis.

Present illness: Had not felt well for about ten days, was very much depressed in the afternoons, said he could hardly drag home from work. Slight headache, felt feverish and chilly alternately, some abdominal pain but not enough to annoy him, and had several attacks of epistaxis. Says he often has nosebleed when well.

Examination showed: Skin dry; face flushed; pupils dilated; tongue, heavy, yellow, moist coating to the tip; very foul breath; tenderness over liver and both iliac fossæ; no bronchial or cardiac symptoms; temperature, 100°F.; pulse, 98; respirations, 26. I told the family that the patient had symptoms of enteric fever and treated him accordingly. He seemed to get worse every day and the temperature went up well over 103°F.; pulse, 115; became tympanitic; had typical stool of the typhoid, but no rose-spots. Very slight bronchitis developed. I was almost sure it was enteric fever, for he had been working in a town where there was a great deal of typhoid and he had boarded at a house where there had been two cases. About the sixteenth day of the disease, and the sixth time I saw him, I noticed an odor different from typhoid and found a profuse general eruption that I could not mistake, for it was measles. He was a very sick man.

About sixteen hours later he became nauseated and began to vomit. I cut off all medication, food and fluids, later tried all forms of medication, internal and external, with no effect, except to make it worse. He had suffered this way for twelve hours, his pulse was very rapid and weak, temperature had fallen two degrees, and he was in a bad way.

I have given morphine for vomiting at times, with good results and with bad, and I thought I could not make matters very much worse with the hyoscine, morphine and cactin tablets. So at 10 p. m. I gave a half dose. During the next forty minutes he vomited one mouthful of mucus and tried to vomit once or twice. I gave the second half tablet at 10:40 o'clock. He went to sleep

and I left. I was in to see him the next morning and he was braced up on a pillow, said he felt better than he had for three weeks, and that he was hungry. Temperature was normal and pulse a little rapid. His tongue now cleared up rapidly. He was out of bed in three days, and out of doors in six, against my wishes. He has been in remarkable health ever since.

I gave the full account to show a peculiar clinical picture, with the abrupt termination of what seemed to be a desperate case, and a new and valuable therapeutic application of the hyoscine, morphine and cactin tablet.

Case 2. Mrs. L., age 30; marked blonde; previous health good; good family history; one pregnancy, normal termination. She contracted measles, had a very profuse eruption, but was not very sick until the third day, when she became nauseated and began to vomit. They had had no physician and tried home remedies, with no better result than to make her worse. I was called about 2 a. m., and I promptly gave her a half hyoscine, morphine and cactin tablet and awaited results. She promptly went to sleep and I left. I saw her husband the next day, who said she had not vomited any more and was much improved and thought I would not need to call again. He said she had talked all night as I had told she would, but in other respects was all right.

Case 3.—I did not make any notes of this case and will give it as I remember it. I was called in to see a woman, aged 23, marked brunette, always healthy except for a great deal of dysmenorrhea. It was a first labor at term and she had been pained a little for about ten hours. Her pains were quite regular and ten to twelve minutes apart when I first saw her.

On examination I found rigid os, about enough dilation to admit end of index finger. This was about 11 a. m. By 12 o'clock there was very little progress and she was suffering agony. I gave the nurse a hyoscine, morphine and cactin tablet to give the woman and went home to lunch. I returned about 1:30 p. m. finding the patient asleep; the nurse said she went to sleep in a very few

minutes after receiving the hypodermic. She tossed around whenever she had a pain. At 2 p. m. she woke up and seemed wide awake, but quickly went to sleep again. Dilation was now about the size of a silver dollar and the os was softer. She woke up again about 3 p. m. and after that was awake with nearly every pain, which now came closer together. I had discovered that I had been right on a diagnosis I made when I first saw her, for I had a breech to deal with. About 4:30 p. m. the membranes ruptured; the dilation was about two and a half inches. She began to complain of the pains and they seemed to be very severe and so I allowed the nurse to administer a little chloroform. The second stage was from 4:30 o'clock on. It took only about two drams of the anesthetic during the whole time.

The child inhaled some mucus and was nearly asphyxiated and it was half an hour before it breathed right. It was very blue all night, did not cry, and seemed in a deep sleep; was all right the next day. It weighed almost twelve pounds without any clothes.

The third stage was easy, wasting about normal, very slight tear of posterior wall of vagina, which was not repaired. Mother slept lightly through the early part of evening and very well the rest of the night.

The woman told me next day that she had very little recollection of any pain, and that was before she had the hypodermic. Says she does not dread another labor. She had but the one dose and that a full No. 1 tablet. All I was worried over was the prolonged effect on the child.

A. F. McCORMICK.

Falls Creek, Pa.

[In obstetrics remember these two things: (1) Always use the half-size tablets, repeating once or twice, at intervals of an hour or more, as necessary in prolonged cases of labor, to keep the woman comfortable. (2) Do not give the H-M-C at or near the termination of labor. If these rules are followed you will have no trouble with the child. The narcosis is from the morphine—an overdose—and is easily to be avoided

when ordinary care is exercised. This combination is the ideal one for the relief of the suffering incident to childbirth.—ED.]

#### ONE REASON FOR NONUSE OF THE ACTIVE PRINCIPLES

You can judge what I think of the alkaloïds by the way I am using them. All diseases of an acute nature have been cut short by "precise medication." One neighbor doctor requested me to quit using the alkaloïds. On asking "Why?" his answer was: "Your cases get well too quick; your bills are too light"—which may be true; but you can be sure that they must get well quick if they get me, and take what I prescribe; and I'd rather treat twenty people three days than two three weeks. Pneumonia and typhoid fever *can* be aborted or cut down to three to five days for pneumonia and to seven to ten days for typhoid.

J. C. P.

—, Illinois.

[The best thing for the "other fellow" is to jump into line, then both of you charge fair prices for good work. You will find, as we have found, that people are always ready to pay for satisfactory treatment—and sooner or later find out where it may be obtained.—ED.]

#### THE OTHER SIDE

In times past, and indeed at the present time also, the chief end and aim of our medical gatherings seems to be solely for the professional entertainment and educational advancement of the members of our noble profession, when gathered together at county, district, state and national meetings. Far be it from me to seem, even in the faintest manner, to decry this practice. It has been, and is, of incalculable advantage, both to us as practitioners and to our patients as well. But it seems to the writer, high time to call the attention of the profession to the fact, that there is another side to the shield; and he has deemed it his duty, feebly and haltingly, perhaps, to suggest to you here, to-

day, that it will be well to consider the fact that the doctor is something more than an educated instrument, to be considered solely as a means of professional betterment to his fellow men; but that he is also a social animal even as they are; that he is entitled, especially in consideration of his wearing toil, his irregular meals, his insufficient sleep, his deprivation of family and social intercourse and enjoyment, his grudgingly and insufficiently requited life-work, to call, not for more work but for more play, and incidentally for more pay also. I do not here mean necessarily larger fees, but a more



DR. WM. C. POST

prompt and willing payment of those already established.

The writer would urge with all his might, that the members of the profession take up the consideration of the question of social relaxation seriously, and give it their best thought; that they consider the importance of the establishment of social clubs or other means of relaxation and social enjoyment for the physician; and that they consider how powerfully such gatherings would unify the profession, and make it a tower of strength

when endeavoring to further legislation looking to the best interests of themselves and their patients.

And last, but not by any means least, let them consider how much such gatherings would do to melt away personal misunderstandings, break down barriers of personal reserve, discourage petty neighborhood jealousies, encourage a higher, nobler and more harmonious feeling among physicians, and otherwise tend toward the establishment of the millennium. And the writer would earnestly call upon you to give this subject your best thought and to do all that lies in your power to promote such an advance.

WM. C. POST.

Maquoketa, Ia.

[This article, which was read before the Jackson County (Iowa) Medical Society, is one which deserves careful reading and thoughtful consideration. Here are problems of real interest to all of us. How can this "millennium" be brought about? Let us hear from our readers.—ED.]

#### ACTION OF THE VASCULAR TONICS AND VASCULAR STIMULANTS ON THE CIRCULATION

Vascular tonics are substances that causes contraction of the arterioles or capillaries: type, digitalis. Vascular stimulants are substances that cause dilation of the peripheral vessels: type, amyl nitrite. (Brunton) We are also commonly taught that the former raise the blood pressure, while the latter lower it. Thus, Brunton says, "Vascular tonics raise the blood pressure." Again, Cushny says, "The nitrites are the most powerful depressants of the blood pressure known," and, like Brunton, he uses the term "arterial tension," as synonymous with "blood pressure." Sollmann also speaks of "the fall of blood pressure due to the vasodilation."

Now this use of the term, "blood pressure," is inaccurate, although sanctioned by custom, and leads to an erroneous conception of the actions of these drugs, which consist really in contraction and dilation of

the blood vessels, with most effect, probably, in the arteriocapillary area, with the result, of course, of increasing or diminishing the resistance to the blood pressure, both the pressure and the resistance (the cardiac impulse and the friction of the vascular tubes) being equally essential factors of the blood current. For all currents, whether of water, blood or electricity are invariably determined by Ohm's law, being equal to the pressure divided by the resistance. The resistance, certainly, makes the pressure felt when we place the finger on the pulse, but it cannot alter it in the least, and the term "arterial or vascular tension" might well be substituted for this inaccurate use of the words blood pressure, in describing the action of these drugs.

JOHN FORREST.

Charleston, S. C.

[This is an interesting point, one which is usually overlooked, and we are glad that Dr. Forrest—who by the way is professor of materia medica and therapeutics in the Medical College of the State of South Carolina—has called attention to it.—ED.]

#### ARE WOMEN PRACTICAL PHYSICIANS ?

Ever since my senior year at college, have I been a devoted reader of the CLINIC—did not have to be converted to alkaloidal medication, for as the daughter of an eclectic who believed in specific tinctures, I only preferred the change in form of medicine, by changing to the alkaloid.

I have said "Amen" to most that Dr. Abbott has ever written on therapeutics, have quoted him as one "way up"—wherein, according to editorial on page 1298 (November) I must have sinned when I thus held him, for authority, in a paper before the State Medical Society; but when he, or some other member of staff, wrote the article on "Claudicant Science" and refers to women in medicine, as not having a serious interest or caring for aught but examination records, I, for one of my sex, object and rise to a point of order. That fling was certainly prompted by jealousy on the part of

the many men who are turned down in grades at examination.

But the doctor's psychological views are not consistent. How any person with a "concentration of quick intellect" could be compared to a parrot is more than I can reconcile.

Now, women physicians have to depend more for their success on the use of remedies, than any other feature of practice. Men can be politicians, call each other again and again for assistance, whereas if a woman would do so as often, it would only strengthen the prejudice already created in the minds of some people who think a woman knows less than a man. That is why we have to study hard, master the subjects, so that our stock in trade of knowledge can go unchallenged.

Women could afford to be bold, striking out in any collateral paths, were there as many of us to stand by each other as there are men.

I am not speaking for myself as an individual, but as a type of woman physician, when I say I claim as much originality as any of the men I have observed in class or contemporary work.

I was the first here to use the H-M-C tablet and write it up for the State journal. I have published four therapeutic articles in one year—two in *CLINICAL MEDICINE*—and I was not trying at all to demonstrate my own "entire correctness"—but Abbott's. However, as this showed not a trace of originality on my part, there is no boastfulness about anything whatever I achieve.

There are a lot of "old-women" remedies, that men do not use, because the authority therefor is not "accepted" (nor would it be "original" to use), that go neglected.

To these that I refer are attached no superstitions, but well-tried remedies, sometimes in the crude. For example, "toast water" for nausea of infants, "sage tea" for nervousness and night-sweats, might be enumerated as a few from a large class of simple but effective remedies that the natural home physician and nurse can rely upon.

It is time that we are up-to-date enough to cease carping about the woman physician, and to treat her fraternally, give her a chance; I think she will prove that her "correctness" extends beyond examination papers.

There are a few women with the timidity natural to their sex who cannot cope successfully with "masculine" men and who give the idea that they are not aggressive; but if this class were estimated with the balance of a different type the percentage would be far below that of the men with this "essentially feminine trait," as compared to their more original brothers.

Let us hear more of the work of women physicians, whom Osler—unquestioned authority?—has said are fitted only for "women's and children's diseases, school inspectors and the Zenana work!" It is only because we are few in number by comparison and our competition does count, that any unfair criticisms are ever made.

But for the editorial department of the November issue, with such broad therapeutic views, to fling such a criticism, certainly shows a narrow point of view that needs a revision.

WINNIE M. SANGER.

Oklahoma City, Okla.

[We take it all back, so far as Dr. Sanger is concerned—and a lot more of our faithful friends among the ladies. Just let them speak out in meetin', fearlessly. We like Dr. Sanger all the more because she stands up and fights for the honor and ability of her sex.—ED.]

#### USES CALX IODATA—LIKES IT

I have used calx iodata (caicidin) with good results, and if anyone will dissolve two or three five-grain capsules in a good-sized glass of water, he will be convinced from its taste that it should be active therapeutically. I have a bottle of five-grain capsules, which I am sure have been kept a year in their container, and they seem the same as when purchased, so far as efficiency is concerned.

I could put no dependence on such an attack as that in the *J. A. M. A.*, since, as you say, they will not print your reply. The *Journal* carries great weight with all well-instructed physicians, but we do not all like its course in many things. I like the alkaloidal goods. I watch results from medicines closely and I find I get them from "Abbott's goods." Our drugs *must* give results. We will no longer be led blindly by a name.

A certain manufacturing house of long standing says its preparation of cascara is eight times the strength of any other. The dose is just about the same as of others and results are no better than the others, therefore I do not believe their statement.

The time has come for some definite provision to be made to insure the quality of drugs and medicines. Preparations having merit will win. I shall continue to use calcidin as long as it gives results.

J. J. CAVANAUGH.

Walnut, Kan.

[Dependability of drug and exactness of application for definite results is exactly our work. Calcidin is therapeutically active—mightily so—and it does good work for the doctor, and the doctor is generally appreciative.—ED.]

#### ANESTHESIA IN SMALL-ANIMAL PRACTICE

I want to give my mite to the fund of H-M-C testimony, which is certainly sweeping the world as the very best combination for anesthesia. Belonging as I do to the wider field of comparative medicine, I have found it to be of value in caring for my dumb patients who cannot respond to questions, asked to determine how much narcosis has been induced, as I notice many of the patients in recorded trials have done.

Early in October of this year, I gave a canine inmate of my hospital that was here for ovariectomy, one tablet—full strength—an hour before I was ready to operate, and she soon responded with vomitus, this condition being brought about, I am sure, be-

cause the morphine was a large dose for her weight. However, she was placed on the table without getting any further dosage of H-M-C, and the cone applied. I use the A



DR. W. HARRY LYNCH

Who has seen active service in the British army in South Africa, in the Remount Commission

C E mixture in the cone. I proceeded with the operation and found that although wakeful to a slight extent, she did not fight the cone as so many of my patients do, and this struggling nearly always militates against the success of the operation, as these patients become nervous, panicky, and are not easy to soothe.

Right here the H-M-C "made good," for just imagine, you human practitioners, hav-

ing some of your patients use up their strength and vitality fighting anesthesia. Well, my little dog required very much less ether, which was certainly an advantage, and did not shrink from the knife. There was no surgical shock, so I proceeded with the operation. When it was over and the stitches inserted, she slept for about five hours, waking without depressing symptoms, stomach all right and she was ready for a bit of fluid supper. The case proceeded uneventfully and she went home with her master in ten days, with the wound fast closing whence her ovaries had been removed.

Since then I have given the hyoscine combination further trials, and have decided that it "makes good," and "the world will buy largely of anyone who can deliver the goods." I have seen no reports of trials from the field wherein I labor, but I am convinced that it is of the greatest value to veterinarians and destined to have a wide field of activity. I believe the percentage of unsuccessful operations will be greatly lowered by its use; little or no ether is required, consequently no danger of failure of heart. Oh yes, I know we all use ether fearlessly, but I do not think many of us will say that it is always safe. The marvellous balancing and tonic properties of cactin seem to stand like a guard over the life of a patient while the hyoscine and morphine depress sensation and defy pain.

Put me down a convert and say that my future surgery includes this agent.

W. HARRY LYNCH.

Portland, Maine.

[We are glad to hear from this veterinary friend. May we not have contributions from others?—ED.]

#### A STORY FOR "THE KICKER"

Well, Doctor Abbott, it does make one smile when looking over the last issue of *CLINICAL MEDICINE*, after being a subscriber for the last sixteen years, to note the change in those years. With such an array of the best medical talent it looks as if there

is nothing too great for you to undertake. The kicking made against alkaloidal therapy reminds me of the fellow who kicked the cow with a "gum" boot on his foot. It hurt the kicker more than it did the cow—and then he wanted to kick himself. I notice many doctors are offering all kinds of reasons why they used to kick THE CLINIC.

W. E. MOORE.

Lincoln, Nebr.

#### PHYSICIAN AND PHARMACIST

An interesting contribution on this vexed and ever vexing question is contained in a recent number of *The Physician's Drug News*, written by Dr. H. M. Holverson of Boise, Idaho. The doctor takes such a sensible view of the situation and puts the "inwardness" of it so clearly that we are impelled to reprint it. It is as follows:

"I have been reading many comments on the dispensing physician in the *Western Druggist* and other drug journals. There is an axiom in mathematics that "things which are equal to the same thing are equal to each other."

"Now the main contention is that the poor people are going to suffer in the hands of the ignorant physician; what I would like to know is, if that physician is too ignorant to dispense who is going to make him any more learned if he prescribes? If a man cannot intelligently prescribe tablets, elixirs and compounds made up by a reliable house I cannot see wherein he is going to do any better in writing prescriptions.

"Is it not true that 95 percent of the prescriptions today do not call for the highest pharmaceutical skill in preparing?

"Then, too, does the druggist tell the people that a physician is ignorant of pharmacy and medicine when they stand between the most densely ignorant prescriber and the patient? No, they do not. If they have an independent (diploma \$25.00 per) man who is sending them 20 to 50 prescriptions a day and a Rush or Jefferson man who is only sending them five, they



send all the people who come asking for a physician to the man who knows nothing about practice and less about pharmacy or medicine.

"I knew a man who wrote a prescription calling for 6 grains of arsenic iodide at a dose and when his attention was called to it he asked what was wrong about it. He used to write prescriptions for 80 grains of antipyrin, 60 grains of calomel, 20 or 30 grains of antikamnia every hour or two hours. It is true that the druggist (a highly educated man) used to cut his doses down to safety, but no one ever heard him tell any one that the doctor was incompetent, yet there were two 4-year high-rank men there and both had a one-year pharmacy course.

"This druggist told people that this doctor was the smartest man ever in the country.

"Then another charge: 'The doctor who dispenses will substitute.' It is most ridiculous. Here I am depending on the results of my medicine to hold my patient and then to say that I would deliberately lose my patient in order to save a few cents by substituting!

"I have repeatedly had druggists say to me, when I asked them to get certain homeopathic remedies for me and specified B. & T., 'Why don't you get certain other preparations; they are cheaper?' My reply has always been that the few cents' difference in price is more than made up in the certainty of the remedy. Any man who has practised more than five years knows the evils of prescribing; also he knows the disadvantages of dispensing only.

"I believe if the druggists would only take as much pains to eliminate the evils that physicians complain of as they are in, trying to shoulder all the blame on the physician, that soon most of us would be doing more prescribing."

[That's a good sensible article, one that fairly represents our views of the matter. Dispensing calls for as much intelligence and skill as prescribing—and it *brings out* these qualities, as well as others equally

desirable. If you don't believe this, do a little investigating for yourself.—ED.]

### THE STUDIES OF REMEDIES

It has been asserted by some that cactus has no remedial action whatever upon the heart. This assertion is based upon a series of experiments carried on in a laboratory. The experiments, as we understand it, were made upon frogs and rabbits and guinea-pigs, the experimenter using cactin. The experiments and conclusions are based upon false premises.

It should be understood, first of all, that many remedies have a dual action. There is a wide difference between the physiological or poisonous action of a drug and its remedial action. A physiological action is a poisonous action. Again, no therapist would insist that a remedy must possess a poisonous action in order to have a remedial action. No one would think of giving aconite, strychnine, morphine, hyoscyamus or hyoscyne, digitalis, ipecac, podophyllin, veratrum, belladonna, and a host of remedies we might mention, with a view of obtaining their physiological when desiring their remedial action.

Again, when experimenting with an alkaloid or the active principle of a plant, we do not always obtain the same action that we would if the entire plant was used. Possibly the most familiar example of this would be the action of digitalin, and an infusion of digitalis. We are all familiar with the fact that when the diuretic action of digitalis is desired it is best obtained by using an infusion. The degree of dilution of a remedy will also influence its action.

Our attention was recently called to this latter fact in an accidental manner. We had prescribed buchu to be taken in hot water, directing the patient to take it in about a glass of hot water. The complaint was made that the remedy was not having the effect desired. Inquiry elicited the fact that, not desiring to take so large a dose, the amount of water had been reduced about one-half. When taken in the amount of water desired the action was obtained.

Every therapist absolutely knows that black haw has a remedial action, yet it can be taken in almost any sized dose, its poisonous action, if it has one, being extremely remote. Yet no one familiar with it will deny but that it has a prompt and very effective remedial action. So it is with cactus. We do not deny the value of the laboratory in investigating drugs, but in this case the experimenter began with a wrong premise, hence his conclusions are wrong. So, in fact, are many of our laboratory drug studies, as well as diagnoses. In the first mentioned, poisonous actions only are studied; in the second, many conclusions are reached which are not borne out by clinical investigations.

You may say this is empiricism pure and simple. Granted it is; empiricism has taught us many valuable truths in therapeutics, and without a knowledge of therapeutics, success as a practitioner is impossible. Many mistakes have been and will be made by relying upon a laboratory diagnosis solely; so, too, will many errors be made in therapeutic drug studies when confined to the laboratory and to poisonous actions.

*Cactus has a remedial action, and every clinician who has ever given it a test will bear testimony to that fact. It is not a heart sedative as digitalis or aconite, but when we have tachycardia, dependent upon a nervous irritation or erethism—in other words, when it is purely functional—cactus will relieve and relieve promptly.*

[We reprint the preceding article from an editorial in *The Eclectic Medical Journal* by Professor Mundy. It is interesting, in view of the attack which is being made upon cactus and cactin, to remember that cactus was introduced to the medical profession forty-three years ago, and that in the years that have intervened it has been used and praised by thousands of physicians of all schools, has found a place in the American Dispensatory of Felter and Lloyd (eclectic) and in most of the works on materia medica and therapeutics, regular and sectarian. Only within the last year or

two has it been attacked—and, mind you, as a means of attacking *us*. Why?

Please remember, too, that those who have attacked cactus and cactin are not clinicians, practising physicians, but men who have depended for their arguments upon animal experiments such as Professor Mundy describes. The men in the field, the *real* doctors, are just as enthusiastic in its praise as ever. Don't worry about the "inertness" of cactus—or cactin!—Ed.]

### THE COUNTRY SURGEON

Luckless is he, whom hard fates urge on  
To practise as a country surgeon.  
To ride regardless of all weather,  
Through frost, and snow, and hail together.  
To smile and bow when sick and tired  
Considered as a servant hired.  
At every quarter of the compass,  
A surly patient makes a rumpus,  
Because he is not seen the first,  
(For each man thinks his case the worst)  
And oft at two points diametric  
Called to a business 'clept obstetric.  
There lies a man with broken limb,  
A lady here with nervous whim,  
Who, at the acme of her fever,  
Calls him a savage if he leave her.  
For days and nights in some lone cottage  
Condemned to live on crusts and pottage  
To kick his heels, and spin his brains,  
Waiting, for sooth, for labor's pains.  
And that job over, happy he,  
If he squeeze out a guinea fee.  
Now comes the night with toil oppress  
He seeks his bed in hope of rest.  
Vain hope; his slumbers are no more,  
Loud sounds the knocker at the door.  
A farmer's wife at ten miles' distance,  
Shouting, calls out for his assistance.  
Fretting and fuming in the dark  
He in the tender strikes a spark,  
And as he yawning heaves his breeches,  
Envies his neighbor blest with riches.

[Sent us by one of our good friends—and we have mislaid his name!—Ed.]

### ANOTHER BAD ATTACK

An appendix hung lightly in place,  
Said, as it looked the large cut in the face,  
"If you don't take a purge,  
Then we'll all sing a dirge,  
When the surgeon gets into this case."

A husky plasmodium floated by;  
The white corpuscle stood back with a sigh,  
When along came a drug,  
Which soon gobbled the bug;  
And the name of the nimrod was "qui."

An ovary said to the liver, "Dear me,  
This place is so cramped, don't you see,  
If that corset gets tighter,  
We'll all have to sight her,  
The only thing left 's 23."

A hypo from old Tennessee,  
Said, "I'm dying, I'm cold to my knee."  
But the doctor looked wise,  
At his friends, the wise guys,  
And dished out a dose of "pla-ce."

There was an old Tic douloureux,  
That had the man's patience worn through,  
But the Doc got on right,  
And soon put it to flight,  
When his H-M-C whispered skidoo.

R. G. HENDRICKS.

Rosston, Ind.

### STILL MORE "LIMERICKS"

A Chicagoan, minus a lung,  
Got drunk and then shouted and sung,  
Judge said, "Why so frisky?"  
"I was Toughy's Salt Whisky!"  
"Ten dollars!" Again he'd been stung.

Dey k'varreled. Greta took oil uv cedar  
Ven Hans said dot not more he vood need her,  
But k'vickly flim-flame,  
Vent dot schmall diaphrame;  
Apomorph savet ein vrow for Hans Peder!

A druggist, o'erworking his jaw,  
Was discoursing of Abbott and Waugh,  
"Thought, beside their granules,  
Our slops are poor tools,  
Those fellows should be stopped by law!"

Then he worked up a passion intense,  
'Tis a fact that his rage was immense,  
"D-n that alkaloid tribel  
(Of course I prescribel)  
But they have no right to dispense!"  
WM. E. PHILLIPS.  
Springfield, Mass.

### THE LION AND THE MOUSE

Foh many yeahrs Ize ahgued,  
Sah, ah thot ah ahgued good,  
Dat de prin-ci-pel ob med-i-sine  
Iz suh mis-under-stood.  
Foh de niggahs whaf lib roun heh,  
Hab no phi-os-o-phy,  
An dat whaf's scientifick,  
Jes make dem laff, he! he!  
I 'vealed to dem dat 'laria germs,  
Would di when de quinine,  
Waz slushunized wif he-ma-glob,  
Wifn de crimson brine;  
An dat de rottin sif-il-us,  
Cood'nt hab its stages '3'  
An would dis-ap-pear,  
In 'bout three yeah,  
If smeachehed wif mer-cu-rie.  
Ah splaned 'bout de morphine, pale,  
Whaf sas-si-nates all pain,  
An how in-fuze ob dig-i-tale,

Do help de hahrt whafs lame,  
Den ex-pla-na-shuns ah did gib,  
Ob do way old cal-o-mel,  
Would cleen de 'testines an de lib,  
An make de bilyous well.  
All dis I preached wif mighty vim!  
An wif-out no rec-ko-pence,  
But eb-o-ry ig-no-rant ob dem,  
Wuz 'bued wif Chris-tain science.  
An Sunday when our pahson read,  
Foh gospel, whaf Bill Osler sed,  
Ah knew as doctoh ah waz ded.

JNO. C. O'DAY.

Oil City, Pa.

[Dr. O'Day's poem was inspired by reading an article upon "Therapeutic Nihilism" in *The Dietetic and Hygienic Gazette*, from which excellent journal we have borrowed it. Good, isn't it?—ED.]

### TOUGH ON HENDRICKS!

The rich Mr. Jonathan Hendricks  
Was removed from his rotten appendix  
To his home in the land of the blest.  
The home doctor, he, got a wee little fee,  
And the surgeon—well, he got the rest.

E. A. STAFFORD.

Snohomish, Wash.

### AUTOMOBILE INFORMATION

In reply to Dr. Hunt, who desires information about automobiles, I would say that in October, 1905, I bought a Ford two-cylinder light touring car. This car gave me such good satisfaction that in November, 1906, I bought the Ford model "N" four-cylinder runabout. This is truly a wonderful car, I think the best on the market for the money. The price is only \$600. I have run it night and day, winter and summer, over all kinds of roads, hills, sand and mud, without any expense to me for repairs except tires, two bolts and one spark plug.

I have not kept an account of the cost of running the machine, but of course a four-cylinder car will consume more gasoline and batteries than a one- or two-cylinder car, but I doubt if you can get as good service, easy riding and durability in the latter.

I think every physician should own at least one automobile. I find it very convenient to have two. When my family or friends wish to take a ride I take my light touring car. In this way I derive a good deal of pleasure from attending to my country pa-

tients, while formerly it was irksome with a horse and carriage. I find that my health is much improved by running an auto. This alone is worth more to me than the cost of both machines. Riding in a closed carriage I easily contract a cold, but I can run an open auto all day in the rain without taking cold. The exercise in steering the car keeps up an active circulation, which prevents colds, aids digestion and invigorates mind and body.

Many physicians condemn a really good automobile, when the fault is theirs; they do not give it proper care. I keep a good mechanical man to oil, clean and keep my machine in good order. If anything is required that he does not understand I take it to the man I bought it of. It is to his interest to repair it properly. I would advise that you buy your automobile of an agent who has a good repair shop and make a contract with him to keep it in repairs for a certain time.

J. V. CONOVER.

Elmer, N. J.

#### THE BEST AUTOMOBILE—THE FRANKLIN?

I beg to reply to Dr. Hunt's inquiry in regard to automobiles in the January issue of *THE CLINIC*. His question could almost be answered in the few words, "Any good standard make of car" will fill the doctor's wants. As to the cars he mentions, i. e., Doctor Maxwell, Rambler, Holsman and Auto-Buggy, they are all nondescript cars of little consequence, and possess no features of value from the mechanical engineer's point of view.

The good cars worth putting your money into are few, and when you buy a car it is like buying drugs; it pays to get the best. In my estimation the good standard makes are as follows:

Steam: The White Steamer. (Best car made.)

Gasolin cars, water-cooled: Pierce, Great Arrow (Geo. N. Pierce Co.), Winton, Stoddard-Dayton, Peerless, Packard, Stevens, Duryea, Pope-Toledo, Royal, Carter.

Gasoline cars—air-cooled: Franklin, Aerc-Car.

The Olds people make a fair runabout, water-cooled.

Don't under any consideration get a car with a two-cycle engine. There may be a few two-cylinder cars made worth considering, but most good makes are using only four- or six-cylinders in their latest models.

Without going into detail of the merits of the various cars, or going into the detail of their mechanical construction, design, rate of gasoline consumption per horse power per hour, various types of power transmission, etc., the safest advice I could give is to recommend the Franklin air-cooled car for a physician's use.

Of course if one has a chauffeur to handle and care for his car, or if he is a good mechanic himself then I would say, consider some of the other makes.

F. N. RICHARDSON.

Cleveland, Ohio.

#### AN AUTOMOBILE "EXPERIENCE-MEETING"

On page 98, the caption, "Automobiles—Who is the Authority," caught my eye—not because I thought that meant me but because I am interested in that subject and because I am able to furnish Dr. Hunt a little information in regard to one of the machines he speaks of, viz., the Holsman.

Last May I purchased a new Holsman, model 9; ran it home from Minneapolis, making the 300-mile trip in two days. I have used the machine in my practice ever since and have done much pleasure-riding besides. I had a detachable rear seat made and have often carried four passengers. I have been hauled in once only, and then because of the batteries playing out. I have used a team but very few times since getting the machine, but roads have been exceptionally fine the whole year through. This country is level and I am not troubled with hills. However, I have been out of my jurisdiction a few times, among hills and sand, and am therefore able to inform Dr. Hunt that the Holsman machine is not what

he is looking for and would give him poor satisfaction because it is not powerful enough to negotiate sand hills and mud successfully unless he would be content to grind along on the low gear, and this would cause the engine to overheat badly.

And then, again, if his expenses proved to be anything like mine have been he would find it necessary to spend a large amount of time in tinkering on the machine to keep things in shape, and would also find the Holsman Company a very independent and unsatisfactory firm to deal with in the matter of extras, etc.

Before purchasing an auto I kept a team and found it not only as expensive as keeping an auto but more disagreeable, especially when the doctor must be his own stable boy. With the auto I make my trips in about half the time it would take with a team and the ride is generally a pleasure instead of a disagreeable task. I have gone a distance of six miles from town and have been back in my office in less than one hour from the time of starting—this including time spent in making examination of patient, dispensing medicine, etc. I feel that I would never be content to go back to horses again but my Holsman is for sale and I think I shall try a Cadillac next, and would advise Dr. Hunt to read the booklet entitled "The Truth about the Auto", put out by the Cadillac people.

Now in regard to air-cooled engines—they are theoretically much to be preferred for a doctor's use, as he must be on the go winter as well as summer and it would certainly be a fine thing to eliminate water troubles, freezing, radiator-leaks, etc., and it may be that in some air-cooled engines the advantages are practical as well as theoretical. My Holsman engine has not given me excessive trouble in this respect, but upon several occasions it has overheated so much as to enable me to get but little power and this occurred when, so far as I was able to ascertain, lubrication and gas intake were functioning properly.

The Franklin auto is equipped with air-cooled engine, and the recent road tests, and tests in auto shows, would seem to justify

the makers in their guarantee of perfect cooling, but "catalogue guarantees" are sometimes misleading. The Holsman Company "guarantee" (cataloguely) *perfect* cooling. They also "guarantee" their cable drives not to slip but I notice this does not keep them from slipping in a most aggravating manner at times. Some readers of this journal have doubtless put the Franklin or other air-cooled engines to the test and their testimony would be of interest to many of us.

The automobile question is becoming an important one to physicians and if Dr. Abbott will permit his readers to hold a regular old-fashioned Methodist experience meeting and if those who have had the experience will "get the power" and give testimony freely, giving their disappointments as well as their successes with automobiles I am sure a large number of physicians would profit thereby. Any automobile made will at times give trouble and the physician should endeavor to know the anatomy and physiology of his machine perfectly. He should buy books on that subject and post himself and then if any part fails to functionate properly he will have some idea of the pathological condition and be able to remedy it himself, as a rule, without help from an expert.

L. M. LOWE.

Glyndon, Minn.

[The "experience meeting" is declared open, and the "love-feast" commenced in this number. While we can not give so much space to this subject as to crowd out important therapeutic matter, we shall be glad to hear briefly from anyone who has had experience with the automobile. Will not someone epitomize the *ideal* doctor's automobile, so that we can have something to "measure to." We already have on hand two more splendid articles on the automobile which will be published in April.—ED.]

#### NOTES FROM THE FIELD

*Æsculin*.—Have never been disappointed with it in hemorrhoidal cases; progress often

slow, however. I always also use calomel, podophyllin and bilein compound—one tablet daily. Æsculin, in one case—my only trial—has removed soreness and heat from varicose veins of the legs; so much so that the patient removed his elastic stockings.

*Echinacea*.—Brilliant results in cases where pus was at a minimum, with dead fibrous tissue; used internally and externally. Poorer results in the staphylococci abscesses. Echinacea used in confinement-cases has seemed to me to cause marked diaphoresis in the majority of cases, though uncomplicated by high temperature. One tablet given every two hours as a prophylactic. Had but one temperature over 99° C. in the past fifteen cases, that one a forceps-case.

*Cactin*, in spite of anything *The Journal of the A. M. A.* may say, has worked wonders in irregular pulse. Woman, 80 years old, failing compensation of heart from arteriosclerosis, had marked arrhythmia during and after an attack of dysentery. Cactin in less than twenty-four hours brought results. Had a few other cases but none so marked.

*Emetine* cured the foregoing and other cases of dysentery inside of twenty-four hours—cured so far as blood and tenesmus were concerned.

*Ambrosia* works like a charm in some cases of hayfever and is always worth a trial.

*Hyoscine, Morphine and Cactin Compound*, half-strength, in two cases of premature deliveries (with pain so severe that the patients said it was far worse than their "full-term babies," due to the cervix which would not dilate), caused full dilation in less than half an hour after the first injection. Two injections did not lessen contractions of the uterus, *did not lessen pain much*, but did allow dilation.

*Calcium Sulphide*.—I do not believe some patients can be saturated, others can be saturated in twenty-four hours. One case, gonorrhea of chronic type, used six granules every hour in the daytime for a month—not saturated, also no cure. A tubercular case, girl four years old, had an attack of what I call acute pneumonic phthisis—galloping consumption. For fourteen days the pa-

tient received four granules every half hour in the day and every hour at night; anti-tuberculosis tablets, one four times a day; nuclein, calcidin and codeine in addition. Result: recovery, though consolidation still exists in the lungs. Patient, however, did not become saturated.

In no one line of work have my results been as encouraging as along tuberculosis. My regular treatment is magnesium sulphate whenever the appetite becomes too bad, a calcidin-codeine-creosote cough mixture, p. r. n.; calcium sulphide in full dosage, and anti-tuberculosis tablets as often as one every hour if necessary to produce results. This treatment is sure to make an optimistic doctor.

C. J. PFLUEGER.

Fogelsville, Pa.

#### THE FORCHHEIMER TREATMENT FOR EXOPHTHALMIC GOITER

A number of physicians have recently called our attention to a new method for the treatment and cure of exophthalmic goiter. The treatment consists in the administration of rather large doses of quinine hydrobromide for a considerable period of time, with the addition of ergotin in some instances; they state that this treatment has produced excellent results in practically every case. The tachycardia disappears usually in forty-eight hours or less, this being followed by the rapid amelioration of all the other subjective symptoms. Their attention was called to this treatment through the writings of Dr. Forchheimer of Cincinnati in his book on "Prophylaxis and Treatment of Internal Diseases," a valuable textbook that we have often consulted to our distinct advantage.

We quote the following *in extenso* from the above-named text:

"My favorite method of treatment which I have employed for over twenty years is as follows: It consists in the continuous use of quinine hydrobromide, with or without ergotin. This salt was chosen because it is better borne by patients than the other salts, i. e., cinchonism is not so easily produced.

As will be seen, my experience has been very extensive in the use of this drug.

"Quinine hydrobromide is given in doses of Gm. 0.3 (grs. 5), in gelatin-coated pills, four times daily; to each pill is added ergotin, Gm. 0.065 (gr. 1), when the quinine alone does not give results in forty-eight hours. As these pills may have to be given for a great length of time, I may here say that I have never seen any bad permanent effects follow their administration; one of my early patients took four of these pills daily for nearly three years without detriment to herself. The effects of this method of treatment are as follows: First the tachycardia disappears, then the thyroid gland diminishes, and finally the tremor and the exophthalmos. The first change takes place usually after the treatment has been used for forty-eight hours; it should then be continued until all the symptoms have disappeared; in the fully developed cases this result has been reached in as short a time as four months and as long a time as three years.

"In the treatment of twelve fully developed cases I have had only three failures; in abortive cases there have been less. I do not take into consideration the number of cases I have seen in the last three years, because relapses may occur up to this time. The failures were in that class of cases which may be called the foudroyant form, originally so or developing as such in a relapse. Occasionally, however, a case is found in which there is no apparent reason why the treatment should not succeed; however this may be, nine of my original twelve cases have been without any symptoms for at least three years and may be considered perfectly cured. I have seen a large number of cases of the aborting form, especially those developing during or after the menopause, improve under this treatment in from four to six days, so that the whole clinical picture was changed.

"On account of the general condition—the extreme nervousness of the patient, for instance, or the state of the heart—it frequently becomes necessary to supplement this method by the Weir Mitchell treatment.

"In order to test whether the recovery is complete it is only necessary to withdraw the quinine; if symptoms do not return in two weeks the patient may be considered cured. How the quinine acts it is impossible to say; it may act indirectly upon toxic bodies in the blood, by slowing the heart, by contracting the arterioles, or by stimulating inhibitory centers. At the time of writing I have treated forty-one cases of Graves' disease with this method, with five failures."

Dr. Forchheimer does not state how long he continued the ergotin in the cases requiring it; probably until the subjective symptoms largely disappear. One of our correspondents found the ergotin necessary in two cases but was able to discontinue entirely its use in one month.

We hope that a large number of physicians will make trial of this valuable suggestion and let us know results. To us the procedure seems rational.

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#### THE TREATMENT OF GRIP

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I desire to call the attention of the profession to the use of *eupatorium perfoliatum* for the muscular soreness of "la grippe."

From time immemorial the residents of rural districts have made use of "boneset" in the form of a hot infusion to "break up a cold." Its diaphoretic qualities are very marked. In grip we find a condition of fever, headache, muscular soreness, frequently coryza, cough, constipation, all followed by nervous depression. Providing I am able to properly control my patients I find the condition usually very amenable to treatment.

After thoroughly soaking the feet in hot mustard water and thoroughly rubbing the legs up to the knees the patient is put in bed in a well-ventilated room. If the head is hot ice water or the ice cap is applied to the forehead. If the headache persists a strong mustard paste is applied to the cervical region, but in some cases where cold applied to the forehead does not relieve, a weaker mustard paste is applied to that region. These patients never do well so long as the

feet are cold. A hot-water bag, or better a hot brick removes this symptom.

I allow liberal quantities of cool lemonade, or orange juice that has been previously strained through a cloth to remove the pulp. Abstinence from all food is enjoined for a day or more according to the conditions, after which I allow buttermilk (the old-fashioned kind or that made from milk by the use of "lactone" tablets), clam or oyster broths, weak meat broths, but never sweet milk.

As soon as the temperature becomes normal, I allow baked apple, scraped raw apple, and celery, followed later by the juice of boiled beefsteak and lamb chops, spinach, raw oysters and soda crackers, returning to a more liberal dietary with great care. Sponge baths of two tablespoonsful of vinegar or alcohol to two quarts of hot water are used throughout the case at intervals determined by the condition of the skin and the amount of restlessness.

My medicinal treatment consists in cleaning out the gastrointestinal canal by the frequent and thorough use of calomel and podophyllin, followed by a saline until the tongue cleans and convalescence is established. Sulphocarbolates are freely used throughout the case. The homeopathic pharmacies make a combination tablet triturate of eupatorium, gelsemium and arsenic iodide. Of these, two are given first, then one-half hourly until the patient becomes quite comfortable, when they are given at larger intervals. At this time I give in combination, strychnine muriate and hydrastine muriate every two hours.

The cough is frequently a very severe symptom and one difficult to control. For it apomorphine and codeine is my favorite combination. For the cough persisting after convalescence is established I think well of Angier's petroleum emulsion, frequently and in liberal quantities.

For a tonic, I order a mixture representing to each teaspoonful 10 grains each of wahoo, gentian and taraxacum, with 10 minims of dilute phosphoric acid, made into an elixir and given every three or four hours in a one-half tumblerful of water. This elixir can be

purchased for about \$3.50 per gallon and is a very fine combination.

When the headache is intense and the fever high I have found good service in a tablet consisting of acetanilid, grains 3; sodium bicarbonate, grains 2; caffeine citrate, grain 1-2; monobromated camphor, grain 1-2; tartaric acid, grain 1-8; ext. gelsemium, 1 minim. Two of these should be given every two, three or four hours until diaphoresis is established, when they should be discontinued. In some cases there is a tendency for the symptoms to return during the afternoon or evening, when one or two tablets should be administered. This usually produces marked defervescence. During the administration of these tablets I suspend all other medication except the sulphocarbolates. I like the sodium sulphocarbolate best in grip. I consider acetanilid a valuable remedy which of course needs careful watching as the idiosyncrasy of some individuals is marked. The treatment herein outlined is for uncomplicated "la grippe," which I have found "dead easy" to control.

HORACE R. POWELL.

Poughkeepsie, N. Y.

[Dr. Powell's praise of boneset reminds us that there are probably many valuable remedial principles in the plant world yet to be developed. In treating "grip" we follow the routine as to infectious diseases—empty and disinfect the bowels, saturate with nuclein to develop leucocytosis, sustain with cactin or sparteine rather than the vascular-tensor cardians, keep the eliminant doors open, and feed scientifically, enjoining *rest* until the malady is gone. Disinfect all discharges, and the air of the sick-room with formalin. Combat pain with acetanilid, camphor, cicutine or gelseminine; helonin for respiratory symptoms; sanguinarine to incite vital resistance; passiflora or cypripedin for insomnia, and other remedies as indicated. Aconitine generally is.—ED.]

#### MORE ABOUT TREATING GRIP

The victim of grip knows that he *has* something or that something *has* him. His



chills and fits of shivering, with a general sensation of cold abiding with him all the time, even, paradoxical as it may seem, when he is also burning with fever, his "stopped-up" head and nostrils, his dry and irritable pharynx making breathing and deglutition alike uncomfortable, his coated tongue, accompanied in most cases by nausea and a vile taste in the mouth, his unbearable muscular and joint ache, his harsh, irritating and racking cough, bringing with it after a short time a painful soreness in the throat and chest, and his miserable condition of languid weakness, all combine to make him call loudly for relief. And he has no use for the pitiful pessimist who tells him that drugs will not relieve him and that he must depend upon the *vis medicatrix naturæ* to pull him through. "Scat! I want a doctor," he will be apt to say.

Can he get relief? Sure thing! Stuffed with toxins from crown to solè, he is a living appeal not only for relief from pain but for elimination, with a capital E. Then get to work—quick! Broken doses of calomel accompanied by iridin and podophyllin, followed by a copious saline (this procedure repeated to effect) and accompanied by large draughts of some hot drink—any old thing that will not overload the stomach to the point of nausea, or the circulation to the point of making the heart labor unduly. A full and prolonged hot bath for a starter is a good thing. While the purgatives are unloading the bowel and sweeping out the toxic mass contained therein, the large draughts of hot drink, herb teas, weak *sour* lemonade, weak salt and alkaline solution, cream of tartar solution (*potus imperialis*), will flush the kidneys and skin and cooperate with the purgatives in "cleaning house," and getting rid of contained toxins.

Meanwhile get to work and relieve his symptomatic discomfort. The dosimetric trinity and, in many cases, the defervescent compound to help dilate his capillaries and reduce his fever, digitalin in extra doses if called for by lack of tension in the vessels or muscular weakness in the heart, gelseminine for the muscular pain, accompanied

very often by full doses of ammonium bromide (give this in his hot drink), emetine for the dry cough and, if cough is too continuous and harassing, reenforced by heroin in appropriate dosage, are all helpful.

But the drug upon which I would most rely outside of the eliminators is acetanilid. I am aware that it is the fashion to decry the use of this drug and to hint about many awful examples of poisoning by its use. Well—*maybe*; but I have never seen one and it seems to me that I've given a ton of it first and last. Of course, it has to be given as Opie the painter mixed his colors, "With brains, sir."

I combine it always with sodium bicarbonate and caffeine, and, in most cases, with camphor monobromide, and administer it in small doses, two or three grains, rapidly repeated to effect. In this manner I have always been able to control its action, and, indeed, in view of the extremely rapid elimination of the drug, it is practically the only way in which it should be given both for safety and for therapeutic effect. Having relieved your patient's pain, reduced his fever, driven away his chills and controlled his cough, you have now his lassitude and weakness to consider, and in most cases you have these to consider from the start.

After cleaning out, feed with small meals, at fairly frequent intervals, of concentrated, readily assimilable food. Beef juice, malted milk, eggs, buttermilk, all are admissible. Strychnine arsenate to be given as indicated throughout. When convalescence is established put your patient on the triple arsenates with nuclein. In fact, nuclein may be administered with advantage from the start, as grip is practically an asthenic disease.

Now there is one more remedial agent to be considered, and it can't be given in a pill or potion, and it is *rest—a la* Demosthenes—rest! rest!! rest!!! As complete physical rest as it is possible to establish, compatible with the various therapeutic procedures advised. Drive him to bed and *make him stay there*. And *don't* let him get up too soon. The plea of business

that *must* be attended to has been the means of sending back too many patients who, barely convalescent, have left the bed and house too soon, to a relapse and consequent journey to that bourne from whence no traveler e'er returns.

Now this is a pretty dogmatic paper and there is a great deal of ego in it, but, Brother, it *works*. Try it and be convinced.

WM. C. POST.

Maquoketa, Iowa.

[A splendid paper on a timely subject! Isn't that excuse enough for a *second* paper from Dr. Post this month.—ED.]

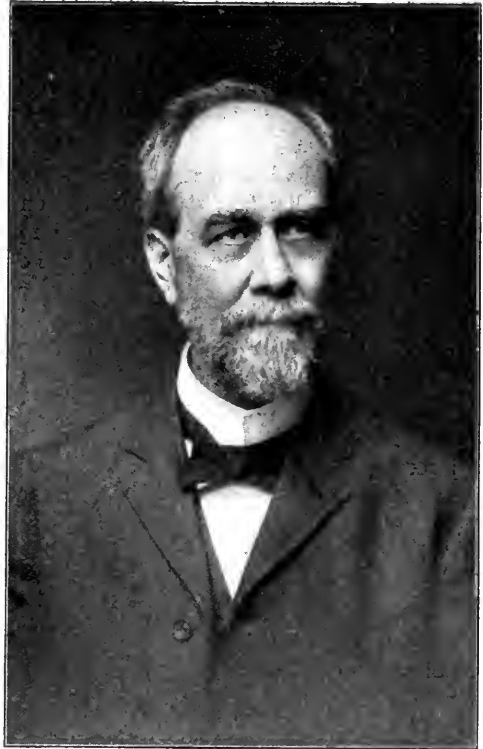
#### "KEEPING THE CHRONICS"

Regarding this question, with your permission, I would give a point of view. A lieutenant of police did say, "Little children are bad, big children are worse and full grown children as bad as the devil." What, if any, connection has this with the practice of medicine? A question easy to ask.

The question at issue, there seems to me to be no doubt, is a vast one. If to be fully understood, it would take in the church question, and the legal question, etc., and no doubt would show that the doctor is destined to christianize the people, that part wherein the church has been a signal failure. Furthermore, Emin Pasha said, "to christianize equatorial Africa would require powder and ball"—the method we have now.

Every person has two sides, viz., a negative and a positive one, and, moreover, every disease has a negative and positive side, and the treatment that has special reference to the cure of chronic disease has failed in its mission if it did not fully consider its fundamental aspect from the two sides. All physicians should know that symptoms mean nothing, which to my satisfaction I have been able to prove on many occasions, and anyone can do the same, with little or no trouble if laziness does not belong to his make-up. Therefore, I say again, the *causes* of disease must be considered in the treatment, and the duties of the patient. For the cure, the following will explain:

After the treatment of a lady with neurasthenia has been concluded we went over the subject that relates to the duties to herself, her husband and her children. The matter was unfinished when she exclaimed: "Yes, yes, yes, there is a lady living right back of us that scolds a child that is near her or any man that stops his horse in front of her house, and she has rheumatism and cannot get well."



DR. A. W. RINGER

I said to my patient: "I see you understand me; be right and act right and I am sure you will not get sick again."

For example, take constipation. I have made inquiries everywhere, and everywhere did I hear, "It's not easy to cure," yet in spite of this statement, I have cured by insisting upon only two meals each day and thereby cured by removing the gluttony, and that cases which I could not otherwise cure by any method that I could learn or physical means known to me.

Again, an ungovernable temper will cause a chronic disease which, I believe, nothing will cure until the patient—not the doctor, as he is merely a representative or agent, or a something on this order—can jugulate. I do not believe that changing a character or name of a disease which occurs from a physical treatment is synonymous to a cure.

So far, I have only considered the cause which all of us must understand—no matter whether you use hot air, electricity, vibration, etc., all methods of the present day that are used in the cure of chronic maladies, or the ancient methods of the old Romans who could “treat daily 25,000 cases by the use of their heat chambers,” or the method of the Indians on the plains with their heat in the “holes in the ground” and massage; all of these are old and many treatments for chronic diseases are very old and the only difference that I can see, lies today in the perfection of the armamentaria. Before any positive cure can take place, that is to say, if you want to cure and not have one disease replaced by another equally as bad, understand both the negative and positive basic conditions. If the patient is “as bad as the devil,” treat that condition along with the physical one. The word “devil” is synonymous with “faults” with the patient. These faults are only remedied by the patient with the help of thinking.

To keep a chronic it is a *sine qua non* to understand the situation fully which will place the physician in a position to explain actual affairs and what must be done; particularly is this necessary for this reason: most people don't think and often they won't think, and when the latter is the case, I don't know but what Emin Pasha's remedy is the best.

There is no doubt, in my mind, that medicine is undergoing some change; time will tell if it is a big one. I have seen what seems to me to be a big one, during the past thirty-five years of my practice; not only does this relate to practice alone, but it takes in diseases as well, and furthermore, if my predictions are correct, the day will come that will find doctors in practice that are great, big fellows, regular giants before

whom none can stand that can cure these cases. The trend today seems this: teachers and preachers are instructors to teach the people to think, i. e., think for themselves. Any doctor who understands chronic diseases can cure, positively, any case, be it tuberculosis, rheumatism or neurasthenia, if the patient belongs to the thinking class.

Some may think I am a Christian scientist or perhaps a Dowieite—all fakes, cheats, swindlers, in a high degree, and I like these about as well as I do the so-called “patent medicines” now on the market, or druggists that habitually repeat prescriptions, against all common decency. Here an unusual amount of damage has been done that is past belief. The one is about as good as the other, for “good will” toward mankind.

The conclusion as regards “keeping the chronics” is:

Diagnose correctly.

Understand the case, *with* the patient.

Analyze the case as to thinking qualities and if you find he thinks, cure him, and if not, shoot him.

A. W. RINGER.

Cincinnati, Ohio.

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### HE HAS READ OUR SIDE

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I have just read with much interest your reply, in *The Journal of the American Medical Association*, to the attack made upon H-M-C in that journal. All that I can say of their “comment” is that it is disgusting. There are thousands with me, I am sure, whose faith in Abbott will not be shaken by any such one-sided arguments. Let the good work go on!

E. E. FLAGG.

Moreland, Okla.

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[That's the tone of dozens and dozens of letters which we have received from our friends—even from those who do not know us, do not read CLINICAL MEDICINE and are unacquainted with the character of our work and the full scope of our ideals. Faith in the “square deal” is implanted in the hearts of every really open-hearted man, and the doctors of the country are being

neither fooled nor befuddled by these attacks upon us. We stand for the doctor, first, last, and all the time!—ED.]

#### THE CLINIC A HUMMER

My! But the last few numbers of CLINICAL MEDICINE are "hummers." Simmons and some others will soon begin to sit up and take notice." They probably know by this time that you will "fight it out on this line if it takes all summer." As the Turks say, "May your shadow never grow less," and may you have the health and strength to break the lines of the opposition as completely as Sheridan did at Cedar Creek. I was on the skirmish line for eight hours of that fearful day and the man on my right and on the left were both badly wounded. I am sure you will win.

F. E. LEWIS.

Fayetteville, Ark.

#### THERAPEUTIC PROGRESS AND THE ALKALOIDAL WAY

I greatly dislike hero-worship for it is almost invariably the opportunity rather than the man that counts. Almost any individual of average intelligence would become a hero if only the opportunity were present. Likewise am I disgusted with hero worshipers. But I do believe in aiding, encouraging, countenancing and supporting any good and deserving cause and all of those who are devoting their time and talents to it. So it is with no apology that I herewith offer tribute, panegyrically, to the editors of THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

Why? For years I have noted the wonderful growth of your journal, and realizing the vast amount of good that you have accomplished by your perseverance, in spite of all the recalcitrant comment of adversaries I know that you are right, or you could never have succeeded against such a cohort of inimical professors and editors, *et id omne genus*. And you have as your justly earned reward the knowledge that you have caused men—physicians—to think.

They no longer, the real physicians, attempt to treat a patient for any acute infection without first devoting the proper therapy to the greatest of "canals." Then they exhibit the drug, or drugs, that are indicated. And they know which drugs are indicated, because they have been studying therapeutics since they began to read THE CLINIC. *To think* means something—almost everything. And the old routine and haphazard way of prescribing is void of good results.



DR. H. J. MORLAN

There are therapeutic nihilists for two reasons: first, because it is fashionable among some, who are too careless, too lethargetic, too inimical to progress to fortify themselves with the knowledge required to give them faith; and secondly, because some of the profession haven't the time to spare from their laboratories of research to familiarize themselves with the practice of medicine—the thing out of which comes their daily bread. This is not only

dishonest, but is absurd. And no one can blame some physicians for being nihilistic if they are to judge the efficiency of medication by the results obtained from their own practice.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE I consider the premier of all medical journals—and I read several—when it comes to educating the profession in that most salient of subjects, *therapeutics*. It is the paramount issue of our practice, and don't you forget it!

I care not what kind of drugs one employs, just so the *quality* is there—suit your individual tastes; but whatever they be, let them be selected with a *precision* and *knowledge* born of an invincible will to *get results*. And favorable ones, too! Our mission as physicians is one of healing, not of experimentation. And while it is peremptorily essential to keep up, it is equally imperative, if you are to succeed, to place therapeutics at the head of the list, rather than to become a therapeutic nihilist in order to chase some infinitesimal bug. That is all right in its place, in the laboratory, but I am speaking of the *practice* of medicine, not pseudoexperimentation.

The greatest of faults with the profession at the present time, as well as for years past, is the perfunctory manner with which it treats therapeutics.

If only every practitioner would devote one-half hour of every twenty-four to the study of therapeutics, by applying the knowledge thus attained, at the end of one year he would be justly entitled to a dollar more for every call than he now commands. And how vastly more useful the fraternity would be! The public is capable of recognizing merit and willing to pay for it. He who thinks otherwise is overdue for a severe awakening.

Therefore, why is it considered undignified for one to champion the cause of a journal that features therapeutics? We should all be alive to this subject, eager to peruse any instructive article concerning it and encourage any journal that is earnestly and actively devoted to this subject. I maintain that it is impossible for one to get the required

knowledge of therapeutics from texts on practice. One should study *materia medica*, therapeutics, pathology and physiology as specialties are studied. And mark you, when one thoroughly understands these, he will be able to apply the proper therapy readily.

THE CLINIC is teaching this and in this way is in a great measure educating a very large part of the profession in this much-neglected essential. It matters not to me whether the gentlemen who publish CLINICAL MEDICINE do have an interest in the manufacturing of alkaloidal preparations. I am indeed glad that they do. It saves me from sending to France or elsewhere for them. You wouldn't get offended at your grocer for keeping a good brand of coffee, would you, even though you always used a poorer quality? And if perchance he were also fortunate enough to control a newspaper in which he ran an "ad" informing the public that he had for sale such an excellent brand of coffee for those who wanted it—you would consider that also very commonplace and take no offense. Certainly not if you were at all logical. Why, then, all of this uncalled-for fuss about THE AMERICAN JOURNAL OF CLINICAL MEDICINE and its auxiliary, the active principles?

It is only the animosity of some other manufacturer being dilated upon by yourself; and you have not as yet realized that you are simply doing and saying the things someone else has said, without thinking for yourself whether it is just or unjust. Your only thought about it, then, is vicarious, and you are daily practising hypocrisy without realizing it. One thing sure: the alkaloids are doing no man harm. And if they are a benefit to some, be content; don't cry till something hurts you. *You* are not compelled to use them or to read the journal unless you choose. Allow everyone else the same privilege, or you preclude yourself the right to be independent. Did you ever think of it in this way?

All people are not liars, and you can see by perusing THE CLINIC (and many other journals) that the alkaloids are decidedly satisfactory—to those who know how to use

them. Alkaloids are a good thing and deserve pushing, that being a quality they themselves have not. But they retaliate with plenty of the "pull." If you are incredulous about this, give them an intelligent trial on some semimoribund patient and they will demonstrate their pulling properties by numbering the patient with the recovered—"uneventful." But it will be some *event*, to the patient—and to you too the first few times you use them. How do I know? From experience, practical experience. The same avenue of proof lies open to you. Try it.

H. J. MORLAN.

Ludlow, Ill.

#### APPRECIATES OUR WORK FOR THE DOCTOR

I am only a country doctor, but I want to thank you for the work you are doing for the country doctors. The alkaloids are all right. Although *The Journal of the A. M. A.* says calcidin is inert, I get wonderful results from it. They say in their issue of September 21 that your cactin is also inert. Well, *it will tone up a weak heart*, so it does not matter if it is "inert," just so it does the work. Can it be that *The Journal of the American Medical Association* is envious of the spread of the alkaloidal movement?

L. L. SMITH.

Blairstown, Mo.

#### MORPHINE IDIOSYNCRASY

The experience of Dr. Nelson, October CLINICAL MEDICINE, page 1269, should teach the need of care in the use of the hypodermic syringe. No other instrument is used so often and so carelessly. It is probable that in his case the needle penetrated a vein, an accident which usually causes alarming symptoms, and may result fatally. If anything is done for relief it must be done quickly and the surest remedy is to cut off the circulation by means of a cord tightly applied between the point where the needle was introduced and the heart. If the doctor is not very sure of his anatomy it is better to introduce the

point of the needle just barely beneath the skin.

Many physicians introduce the needle deep into the muscle with the idea that there is less pain caused by a deep injection and possibly less danger of an abscess following.

With most medicines there is no danger of an abscess, provided ordinary cleanliness is used. In injecting powerful remedies, such as morphine or nitroglycerin, a superficial injection is to be preferred because the medicine does not enter the circulation so fast and hence the shock to the system is not so great as when the injection is deep.

A. E. DAVIS.

Arbola, Tex.

[While this letter was written some time ago, it is in good season, because we are taking up this subject in the Post-Graduate Course this month. Read the next article. Look the matter up—all the phases of hypodermic medication—and let us have a little "symposium" on the subject.—ED.]

#### MORPHINE IDIOSYNCRASIES

After reading in the December number of CLINICAL MEDICINE contributions from various physicians in regard to the untoward and somewhat peculiar, not to say alarming, effects of morphine, at times, when used hypodermically, I feel it a duty, as each should when he feels he is on the right track, to let the world know my own experience. I have had perhaps a dozen of such experiences as are mentioned.

The first occurred some twenty-five years ago; the patient, a young physician to whom I had an occasion to give a dose of morphine hypodermically. The amount used was perhaps 1-4 grain. In less than five seconds after the administration of the dose he jumped to his feet, and clapped his hands over the top of his head. The face, white of eyes, in fact, the whole skin-surface instantly became suffused with an intense red, with a stinging heat. The pain in the top of the head was as if the skull were being lifted. There was a rapid beating

of the heart, a burning of the anus and a feeling of impending death. After perhaps ten minutes the heart beat less rapidly, the redness of the skin surface began to subside, and in a half hour the most disagreeable symptoms had passed off, though the headache, with a feeling of lassitude, lasted for some time. Such are the symptoms, though with a varying degree of intensity, that I have had in my experience in all cases.

Now as to the cause. That it is not due to "dirt" as one has said, I feel assured, as I am always careful to sterilize the needle. Moreover, if dirt is the cause of these symptoms why is it that such symptoms do not follow the use of other remedies used hypodermically? It cannot be "air" injected, for the same symptoms would follow the hypodermic use of other remedies.

That the unpleasant symptoms, we might say alarming symptoms, following the hypodermic use of morphine are due to entering a blood vessel there is no doubt in my mind whatever. When the blood follows the withdrawal of the needle, and especially if there is an *absence of the tumor left by the fluid*, look out for trouble, especially if the fluid is strictly subcutaneous.

But if you are unfortunate enough to have these symptoms follow the use of the syringe is there any way of mitigating the bad results? In many cases, yes. If you have selected the limbs as the point of insertion a ligature or tourniquet passed tightly around the limb will soon check the symptoms. If on the body, in fact, in some subjects with loose skin even if put in the limbs, you may by gathering up the skin between the thumb and forefinger cut off the circulation and thus stop the further absorption of the morphine for a time. If over a bony prominence or over muscles, a cupping glass, wide-mouth bottle or a box-lid pressed firmly down over the point will answer the same purpose and in a very few minutes your patient will begin to feel the disagreeable symptoms passing off. Such at least has been my experience a number of times. These measures simply retard or prevent the otherwise sudden entrance to the circulation.

In conclusion I would say, let no man belittle the effects of the intravenous use of morphine. We should avoid it always if possible; the results are disastrous. If you think not, then allow yourself to experience it once. I once had a consultant who remarked that he often purposely selected the veins for hypodermic medication. It was not long after that he was made to realize that it would not do to be rash in the use of morphine in this way. The patient upon whom we had our consultation died very shortly afterward, and as I have always believed, the death was due to his boldness, not only as regards the quantity but also as to the method of use of this valuable though dangerous remedy.

No, my fellow practitioner, with what thirty-five years of experience has taught me I would say this, do not purposely throw morphine into the veins. If my admonitions and experience put before you in this perhaps too long article, would be the means of saving one valuable life then I have lived to some purpose if I have done nothing more in life.

A. CHENOWETH.

Comanche, Ia.

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### BADLY FOOLED!

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DEAR DOCTOR ABBOTT: I have been intending to write to you for several days but have waited until I could determine on the best line of action. My letter is the outcome of that scientific article in *The Journal of the A. M. A.*, setting forth the identity of hyoscine and scopolamine. As regards the merit of the article I cannot act as judge, for we country doctors without laboratories have to take much on faith, but I can certainly pitch into you and give you a good calling down for jeopardizing my professional reputation, as you have done.

Last summer I read another article in the same official organ, setting forth the inertness and very small amount of iodine in your calcidin tablets. Just think how you have fooled me. I tell you I think it is awful when I think of the consequences.

For years you have fooled me on calceidin and then I have fooled numberless mothers into giving those tablets to their babies sick with croup, and some of them desperately sick, too, and then the mothers fooled the children, and they thinking that they were getting something were fooled into getting well. What shall I do if they find out how badly they have been fooled?

Now this latest outrage of yours with the H-M-C is utterly unendurable. Why, last March I fooled a man so bad with the H-M-C tablets that he laid down in his bed and I scrubbed him up good, and no soul to help me until just at the last when a neighbor screwed up courage to hold the pus basin after nearly all the pus was evacuated. Yes, I opened and drained a big appendical abscess.

Now you look here! This is going to be a serious business for me if he finds out he was fooled. I cannot take any chances without compensation. I must have some salve for my outraged feelings anyway. Years ago you advised me to get an automobile, but now I will let you off and take all chances of being sued if you will get me a good runabout.

Well, here is hoping that you do better this coming year, that you make better goods, that you make better prices, that you make more money.

DAVID B. PENNIMAN.

Argyle, Ill.

#### THE DOCTOR, AND THE SHOP WHERE HE WORKS

The doctor himself, modest, as are most of his fellows, presents and represents himself because no one else has dared, and volunteered, to assume the responsibility. I make my humble obeisance therefore and

say to you as did Hans to the petite miss he wished to make himself known to favorably, "I makes you acquainted mit me."

I am fifty-two years of age and was born in northwestern Ohio; have been in the practice of medicine twenty-four years, six of which experience was in the country and the balance, chiefly, in the present location in this city, Toledo, Ohio.

The experience in country practice taught me its hardships at least and, viewed in the



THE OFFICE OF DR. J. D. ELY

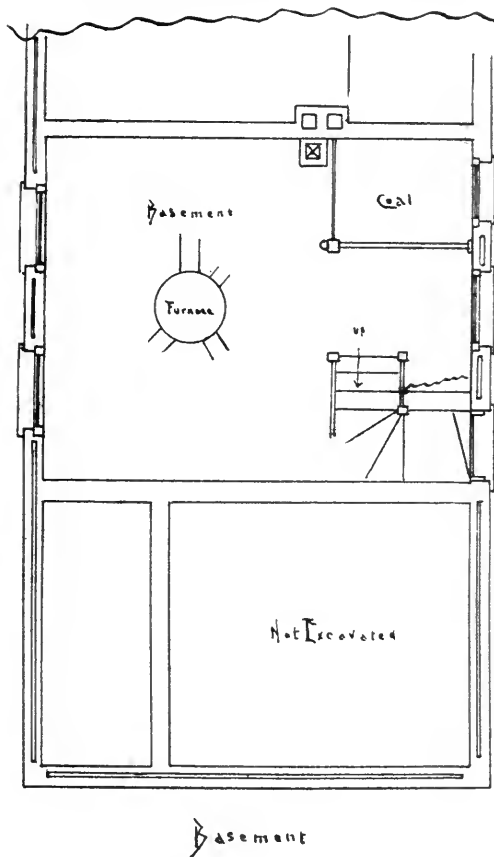
light of experience since, its advantages and disadvantages. My work in country and city is counted equally valuable, and in both, I presume, I am justified in saying average success has been attained.

With all due respect for my city friends, however, I must accord to the good all-round country doctor the palm of generally being the most practical and, consequently, the most successful man. My father was an active country doctor for fifty years, and attained a degree of success that his son has always aspired to, but never expects to reach. He passed to his reward in 1899. My mother, of sterling New England revolutionary stock, is now in her eighty-second year, makes her home with me, and, being



still active, we have reason to hope will be with us a happily long time yet.

*The shop where we work*, now to be considered, is next in importance to the tools we use, if indeed, it is not of equal or greater. The one illustrated here is the latest of a considerable experience I have had in office planning and building and, all considered,



coated with dark-green paint. The cornice, window frames and other outside wood finish are painted yellow to match the brick. The basement contains a hot-air furnace, fitted for burning natural gas (the fuel at present being used) and coal; gas and water meter, motor pump, compressed air tank, and coal-bin. Drain from operating room discharges into catch basin in basement, which has cement floor.

*First floor.*—*Waiting room* is about 12x12, old mission finish and has furniture and rug to match, the walls being rough-coat finish, painted orange color.

*The consultation room* is 11x14 in size, the wood work being finished in dark-oak stain; oak floor, oak furniture to match; walls rough coated and painted pea green.

*Drug room and lavatory*, off consultation room, finished in Georgia pine, plain; walls rough finish, painted same colors as other rooms.

*Operating room*, 9x11; walls smooth, white-enamel finish, and has tile floor; closed-in sink and row of drawers, covered over with zinc, clear across end of room.

*Furnishings:* A Wagner water-still over sink, which, by the way, is found very satisfactory; a nicked copper tank for the storage of distilled water, fitted with portable natural-gas burner to keep temperature of water as desired. Operating table and furniture, sterilizer, etc., white enamel.

*Second floor.*—Entrance from consultation room and arrangements as per illustration.

It contains kitchenette furnished with three-burner hot-plate natural-gas burner. Zinc protected shelf and woodwork about, with ample cupboard for cooking utensils, which are enamel and aluminum ware. Sink and bathroom have best white enamel furnishings. A dainty nurse's room at front is about 8x8 in size.

*Front room*, for patients, 11x18, the color of enamel paint of walls of which is very light green; woodwork, dark oak, polished.

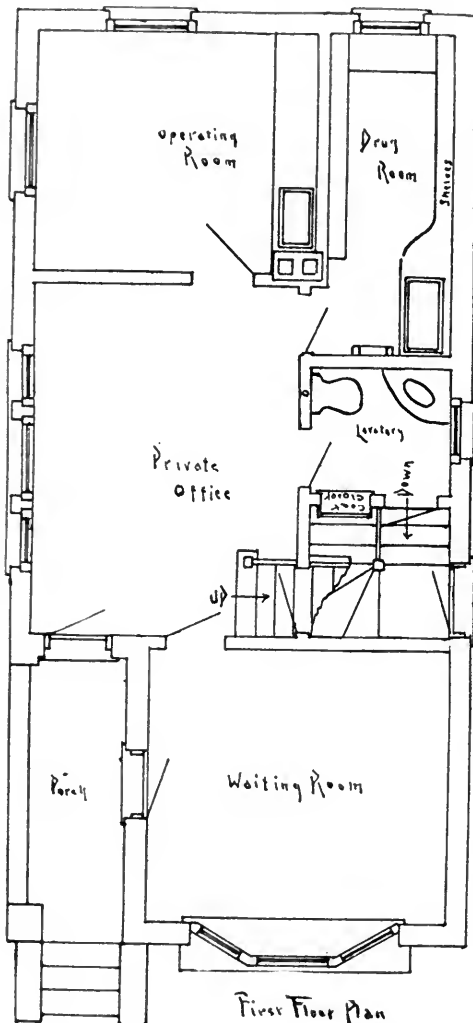
*Kitchenette and bathroom*, cream color, and nurse's room light blue. Waxed oak floors for all rooms which are furnished with approved aseptic furniture. Water faucets supply filtered rain water, heated as desired

is the most satisfactory. I am indebted to Doctor G. P. Hohly, architect, number 324 Logan Street, Toledo, Ohio, for valued suggestions regarding the operating room particularly, as well as working out satisfactorily my general plans. For any further particulars wanted regarding the building by readers, I suggest inquiry be addressed to Dr. Hohly.

The lower part of the building is veneer, yellow pressed brick, laid in dark mortar, and the trimmings gray sandstone. The shingles, sides and roof, are dipped and extra

by instantaneous water heater. Cistern is outdoor at rear of building.

Combination fixtures for natural gas and electric lighting throughout the building; electric push buttons and calls where desired. This completes the description offered,



and I pass it on to you with the satisfaction of feeling that only the occupying of a first-class office can give, and the wish that all doctors who have not such may have the pleasure and satisfaction of as good or better.

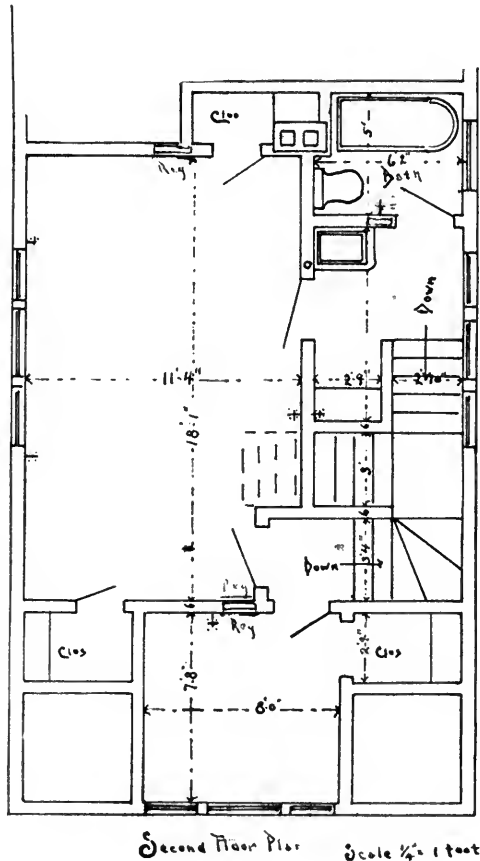
The building cost about \$3500, exclusive of furniture, and is most advantageously located on the rear end of a corner lot 50

x100, having fine lawn and a couple of as nice old apple trees as ever lovers sat in the shade of, in the good old summer time.

Nice sizeable maple trees around the lot so that good shade is given the building and walk surrounding.

*The House we live in*—the Home—"The Incentive"—is commodious and comfortable but not elegant—just good enough we think. The "we" consists of my wife and I, three daughters and a son, and my mother.

My wife is—well, any of you having a home maker and efficient housekeeper will



need no description of or praise for; those who have not are advised to get one as good—if they can.

Our oldest daughter is married and has a two-year old son—our only grandson—that the old folks love so well that they think his

picture ought to be here too. Two daughters at home make it cheerful with music and the lively young friends they bring in. That boy, the youngest, now eight years old, all our friends say, is a chip of the old block. He says he is "going to be a doctor, like pa" and, as I don't feel like discouraging him in the thought at least, I am hoping he will be a better one.

*Finally.*—Alkalometry has been a fascinating study with me for some time, and, although I do not use the active principles exclusively in my practice, I am pleased and satisfied with all I have become familiar with, particularly those sold by The Abbott Alkaloidal Company, whose goods I have given a preference in my purchases for several years. The alkaloidal idea appears to me the most scientific and, evidently, is sure to grow in favor. Precise dosage, positive action, definite results.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE ably sets forth the advantages of exact medication, all its readers will admit I am sure, and the spirit of positiveness and confidence expressed carries with it conviction, and makes for the greatest success.

The optimistic attitude of its editors and contributors is enjoyed by me, for I am an optimist also, as one might expect all readers of such a journal should be, if they are not.

We live in a grand old world, full of the good things of life to look and work for and, notwithstanding the present turmoil, strife and great social unrest, are making for and must soon have a better system of government, and attain a higher civilization.

All things are working together for good.

Let us join the boosters, and help push the alkaloids, THE AMERICAN JOURNAL OF CLINICAL MEDICINE, and all other good things along.

J. D. ELY.

#### THE BEST MEDICAL JOURNAL

Without any hesitancy I can say that CLINICAL MEDICINE is the best medical journal published. Doctor Abbott, I know you are a resourceful man, but tell me, how can you improve on your most excellent

work? Those little fellows who are forever crying out "commercialism" are to be pitied rather than censured. Your efforts are right, your products are right, and your editors are all right!

W. G. MITCHELL.

St. Andrews, Florida.

[And, Doctor, *you* are all right!—ED.]

#### AN EXPERIENCE WITH CACTIN

Just a few words about cactus grandiflorus and the concentration, cactin. I note that some would-be authorities connected with *The Journal of the American Medical Association* make the claim that this drug has no therapeutic value, because they can produce no physiological results on animals. It is my prayer that the medical profession of this country be protected from such authorities and such teachers.

I have used in my own profession, and for several years, both cactus grandiflorus and cactin, it first being recommended to me by the late Dr. J. F. Finney of the New Orleans Board of Health, as a corrector and general tonic for tobacco heart; about one year later I was examined by Dr. G. Frank Lydston, who said to me, "Thack, the old machine is worn out; take things easy and don't go into any new enterprises and you may live ten years more." This was in 1895 and thanks to cactin I am still at work and the old pump is working as steadily, although not quite so strong, as it did forty years ago.

By reason of the tirade against our good friend, Dr. Abbott, I concluded to test, in my own case, the effect of a more pronounced dose than I am in the habit of taking, and in pursuance of this decision I took on January 28 four granules of 1-134 grain each. In fifteen minutes after taking there was a marked increase in the strength of the pulse and at the same time there was an intense throbbing at the occiput with a deep-red flush of the face. In half an hour after the first dose I took two more granules of 1-134 grain each, with the result as before stated, only more marked.

The flushed face and headache continued until about 11 p. m. and in the meantime there was a pricking, scratching sensation in the heart; this, while not particularly painful, was annoying, and at the hour named I took 1-6 grain digitalin and went to bed and slept quietly during the night.

While I am perfectly well satisfied that the small dose of cactin has been and is a benefit to me, I am certain that the larger dose would prove harmful if persisted in.

This is given for what it is worth and you may use it at your pleasure.

W. T. THACKERAY.

Chicago, Ill.

#### ANENT DR. GOULD'S CRITICISM GENERALLY

"New Years Gift." The January number of CLINICAL MEDICINE came to hand yesterday and so far as I have read "she is a hummer." I have read and reread Dr. Gould's article and shall read it again. The more you read and the better you understand it the more you like it. Of course it would be impossible to write so lengthy an article (on such a topic) and not say something displeasing to somebody. Yet Dr. Gould is not a quibbler. You need not misunderstand him at all. He says what he means and evidently means what he says.

Exposures.—The year 1907 has been a year of exposures of "(spiritual) actual wickedness in (high) official (places) positions." There has been more dishonesty (to put it mildly) exposed during the past year than in any year heretofore.

"Be sure, your sin will find you out," has been demonstrated time and again but not so much among the extremely rich as now. The exposures have been (heretofore) among the lower class.

Glass Houses.—Dr. Gould certainly does not live in a glass house or he would not cast such a fusillade of rocks. He is fearless or he would not attack those so able to defend themselves, yet it is not a "bread-and-butter" affair with him. He has counted the cost and seems to defy those whom he defames and to seek the verity of the matter.

He is able and in a position to take care of himself in a polemic war.

*We need men.* We need men who are willing to make some sacrifice for the sake of right, men who will tell the truth at any and all times. Dr. Gould did not look to see if his article would be *popular* or *paying* but took deliberate aim and fired at the enemy, and if I mistake not there will be some yelling, indicative of the certainty of the aim and the painfulness of the wound made by said shot. 'Rah for Dr. Gould!

There is nothing new in human nature. A rascal is a rascal whether in or out of the profession. A rascal in power will use it for selfish purposes. The temptations incident to wealth and high position are great. The temptation to appropriate a million dollars of state funds is greater than to steal a dollar, but a rascal will do both. 'Rah for Dr. Gould!

Alkaloids.—I am reading your literature with increased interest and if the treatment "pans out" I shall report. Lately I have stumbled upon a combination of remedies that gives good results: Specific echinacea, drs. 2; lime water, to make ozs. 3. Sig.: Teaspoonful every three hours. You know lime is an old remedy for boils, echinacea a new remedy for all kinds of septic troubles. I combined the two for carbuncles and boils, which disappear more rapidly under this than other treatment heretofore given.

W. P. HOWLE.

Charleston, Mo.

[Thank you, Doctor, for your good wishes. I hope the coming year will be one of pleasure, prosperity and advance in all ways for you and yours.

I am glad you appreciated Dr. Gould's great paper. He is a man whose worst enemies have never questioned his absolute honesty or his ability; besides, he is one of the men who has courage to speak out his meaning and say what he thinks, regardless of who may be hurt. There never can be the slightest suspicion of his being allied with any commercial interest.

I hardly agree with you that Dr. Gould counts the cost before he makes public such

an utterance. He is one of those brave men who, strong in the consciousness of his own uprightness, abhors deceit and wrongdoing in others, and all the more if it be under the cloak of righteousness; and the personal consequences to himself, in the way of making enemies, do not swerve him a hair's breadth from his purpose or dull the point of his spear.

Doctor, I am very glad to know you are studying the alkaloids. They are worth it. It is no mere question of the substitution of a better class of remedies for the old ones, but when you understand the matter in its entirety you will find it nothing short of a revolution in therapeutics. I think there is something in echinacea; if not, then clinical experience with its use is extraordinarily deceptive. I have just been using eusoma as an application to an ulcerated corn, and the patient says emphatically that the bottle of eusoma is not for sale at any price.—ED.]

#### A PICTURE OF DR. CLASON

We think that many of the readers of "THE CLINIC" have wanted to look on the face of Dr. L. Thompson Clason, that genial humorist and optimist, who always has something to say and knows how to say it in a way both to bring a smile upon your face and an idea into your cranium.

Dr. Clason has had so much to say regarding his personal pulchritude that we had built up a picture, "in our mind's eye", of a gay Lothario, with up-curling moustache and silken whisker—a regular heart breaker. Even when that latest of his "poems of passion" appeared, in which he said—

"When the gray gets in your whiskers  
And you haven't any money;  
It's then you have an orful time  
To get yourself a honey."

even then we believed that he was bemoaning the possible passing of that "fatal gift of beauty," which lingered around him still and was not yet become the dread reality. Thus our dreams fade away!

However, we like Dr. Clason "any old way." Whether with grizzled whisker or pointed beard he's still Clason the inimitable! Bubbling with good humor, ready with help-

ful suggestions, always original as to his ideas and his ways of putting them, we are proud to call him a friend of ours and to consider him one of the brethren of the



DR. L. THOMPSON CLASON

"family." And, by the way, Clason, it's about time we had another article from you. Send it along!

#### ACUTE PLEURISY AND A SUCCESSFUL ABORTIVE TREATMENT

Having had many cases of acute dry pleurisy to handle in the last three months I herewith desire to give the treatment I employed for the benefit of THE CLINIC "family." All the cases treated were aborted in from two to four days, the temperature in these cases ranging from 100° to 103.5° Fahrenheit.

The first thing I did on being called to attend a case was to count out six 1-6-grain granules of calomel and six 1-6-grain granules of podophyllin. These I ordered to be taken, alternately, every fifteen minutes until all were taken, then to be followed by a teaspoonful of saline laxative every two hours until the bowels were

thoroughly evacuated. I now injected a tablet [half tablet?—ED.] of H-M-C compound under the skin over the seat of pain and then put on a thick, hot antiphlogistine poultice, to be changed every six hours.

I also gave the patient one grain of "dolorpyrine" powder every fifteen minutes for ten or twelve doses, or until pain and fever was reduced. Then I ordered it given every hour or two for a few days more after the acute symptoms are better. At this time I took off the antiphlogistine and ordered the chest painted with compound tincture of iodine, three times a day for a few days, when I generally discharged the patients cured.

In only one case was it necessary to repeat the H-M-C compound tablet and in two cases in which there was a harsh, dry cough I gave the bronchial granule, which contains: morphine sulphate, gr. 1-25; apomorphine, gr. 1-50; tartar emetic, gr. 1-50; and aloin, gr. 1-10. This combination is a most useful one for all coughs of whatever nature, in children and adults. They are best given in solution with water. For spasmodic croup it is a *specific*, and for acute laryngitis of adults it is splendid, in fact, I look upon this granule as one that should be in the pocket or hand-case of every member of the "family," and although it is not at present listed, I am having them made for me, as I would not do without them.

The after-treatment consists of giving two or three tablets of triple arsenates with nuclein after meals for a few weeks to build the patient up. Or, if you prefer, you can give sanguiferrin. This is an excellent combination for building up the system during convalescence.

W. F. RADUE.

Union Hill, N. J.

### THE STRUTTING PROFESSOR

George M. Gould (AMERICAN JOURNAL OF CLINICAL MEDICINE, Jan., 1908,) gives one of the best articles on medical ethics and its misuse that I have ever seen. He makes it warm for the strutting professor

from beginning to end, without indulging in misrepresentation or false statements. We have professors who strut before the laity to show off their attainments. They love to hear the word "Professor." If you address them with the ordinary "Doctor" they are apt to retort, "How are you, Professor? Where did I go to school with you?"

If you address them with "How are you, Professor?" they will reply, "How are you, Doctor?"

On one occasion I had the misfortune to call one of the strutting professors of the adjunct faculty of one of our recognized colleges, a member of the Association of Americal Medical Colleges, to help me out in a case of obstetrics which required the use of instruments. He began at once to show off by explaining the case to me in the presence of three or four old women. At the close of his speech he wrote a note, to be sent to the college, that "it would be impossible for him to meet his class today". This note was given to one of the women to be telephoned to the college. He then began to tell me what to do and what I had failed to do. I hadn't ruptured the membranes. The women cast glances at each other. Then he assured me that bedside experience was quite a different thing from work on the manikin.

Eventually we got down to the use of instruments, and he insisted upon my using the forceps, as this was an excellent opportunity for me to get some practical experience in the use of instruments. However, I declined to use them, and I gave the anesthetic. He used the forceps. And we had one of the worst bungled-up cases of obstetrics that I have ever seen. He seemed to forget all he ever knew about the use of instruments. He pulled, heaved, surged, and jerked until the woman was dragged nearly off the bed, then the forceps slipped off, and would not hold when replaced. Blood was flowing freely; an internal version was made, and a dead baby was delivered, the death being due to loss of blood from the placenta. The mother's pulse responded to 1-30 grain of strychnine hypodermically. He asked permission to call on the following

day to see the patient, to which I consented. When I called upon the patient I was handed the following note by the acting nurse: "The patient is all right. You had better look after the breasts a little." On the succeeding day he expressed his regrets that he had not ordered me to give a douche immediately after the removal of the placenta. The puerperium was uneventful.

About two months later in the same house another woman was confined, and the "professor" was called to deliver her. After showing one of the women how to give the chloroform he used the instruments, and a baby with a crushed head, who lived only a few hours, was delivered. The patient was douched twice a day for seven weeks, but finally recovered. I was indignant and never called him again.

L. B. EVANS.

Baltimore, Md.

#### CAN'T HELP "BUTTING IN"

I cannot help butting in when I read of H-M-C being held up as dangerous. The public have been killing truth for two thousand years, and I suppose will keep on, but when a physician knocks something that he knows nothing about he is making a colossal mistake. My experience with it has been short but it acted so nicely that to say I was surprised would hardly express my feelings. I have used it in the following cases without assistance, as the nearest doctor is forty miles away: One trephining skull, two laparotomies, one amputation of the leg, one abscess of the liver, nine cases of labor. It is hard to get to use it in the obstetric cases, as Mexicans do not take to it well.

R. M. TAFEL.

Phoenix, Ariz.

#### A DOCTOR'S GREAT HORSE

I would say that I have been a subscriber to your valuable journal for about ten years. I have watched your progress with great pleasure and would be willing to forward twice the amount of this check if you asked it for the publication for the coming five

years. In other words, I would not be without CLINICAL MEDICINE if it cost me \$7.50 per year.

During my work in the Spanish War, you will remember, you forwarded THE CLINIC to me. Later, during my postgraduate course at Johns Hopkins Medical School, Baltimore, Md., the journal was forwarded



DR. F. G. ATWOOD

to me at Ft. Washington, Md., where I had charge of the Ft. Washington U. S. Army Hospital for eight months after the close of the Spanish-American War. Upon my return to New Haven I sent you a card advising you of my present address. I will say that I have been most pleased with the promptness of its monthly visits, and still more so with the contents each number contains. It is with great pleasure that I renew my subscription for the coming five years.

I herewith enclose a photograph showing one of my horses which is of more or less interest to your staff. The horse's name is Nutbearer, he being the fastest horse in

the world for an eight-heat race. This record was made by Nutbearer, 2:09 $\frac{3}{4}$ , the year 1902. At that time he was raced on the Grand Circuit and won a large sum of money for Mr. Joseph Hubinger of this city. The interesting part of Nutbearer to your readers will be that he met with a disastrous railroad accident in East St.

I will say, also, that Nutbearer can travel the road at the rate of twelve miles an hour, and that he enjoys perfect health. Along the left side of his trachea there was a portion about seven inches long which was diseased and has been removed.

He is one of the most intelligent horses that I have ever driven, and is the only



DR. ATWOOD AND HIS WONDERFUL HORSE, NUTBEARER

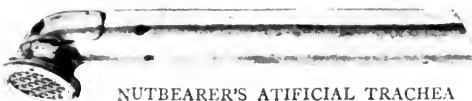
Louis during the year 1903, injuring his throat at that time. During the year 1906 there were several operations performed upon this celebrated horse's throat and

horse in the world which has an artificial trachea.

He, therefore, is carrying at the present time two world-records, one being for the fastest eight successive mile-heat race, which he made in the year 1902.<sup>7</sup>

F. G. ATWOOD.

New Haven, Conn.



NUTBEARER'S ARTIFICIAL TRACHEA

trachea. At the present time the animal wears an artificial trachea, which is ten inches long and which is slightly shown in the photograph, shown herewith.

[We show a picture of Nutbearer and its owner, also one of the artificial trachea. Dr. Atwood sent us a thrilling description of the great race in which this wonderful



horse established its world-record. It is a great word-picture and we regret that the limitations of our space prohibit its use. We love good "horse-flesh"—every doctor should; no matter how cheap automobiles may become, nor how necessary to the doctor's practice, it will be a long time before we shall cease to admire a splendid animal like this one.—ED.]

### PNEUMONIA TWENTY-FIVE YEARS AGO

I do not care to write for publication. Sometimes, however, when reading *CLINICAL MEDICINE* (I have read it for several years, and am using "little pills" and saline laxative every day) and the various reports concerning the treatment of acute febrile (self-limiting) diseases, especially pneumonia, I have felt like having my say, at least a small say, on the subject.

When a student, I was fortunate enough to listen to the teachings of one of the greatest living therapeutists. He believed in medicine, and he does yet. From him, among other things, I learned a little about aconite and veratrum. I began using these agents, one or the other, occasionally both, with my first case of fever. I have been using them ever since; formerly Squibb's fluid extracts (always did wish to know that the medicine I gave would do *something*), now the "little pills," aconitine and veratrine.

I practised nearly ten years in the country. Coming to New York, twenty-one years ago, I was surprised at the mortality in pneumonia-cases as reported to me. I was informed, by men of standing, of the value of antipyrin in reducing temperature in pneumonia. I also learned that they had severe and frequently fatal cases. I desired to make my patients as comfortable, while suffering with fever, as my fellow-practicians did. I used antipyrin in, if I remember rightly, two cases. (I have seen it used in several cases by others.) It will reduce temperature. No doubt about that. I do not use it and have not used it in pneumonia in nearly twenty years.

Frequently I see a report of a case of pneumonia that has been aborted. I wish to report (entirely from memory) a case that I had to deal with about twenty-five years ago.

While on my way to visit a patient one cold winter day I was hailed by a sturdy farmer of perhaps 35 years of age as he was turning into the yard to his home. He was apparently as well as any man could be. I went about a mile, saw my patient and returned. When I reached the home of the above-mentioned farmer the family was on the watch, hailed me and asked me in. I found my friend warmly wrapped, near the stove, with anxious countenance, rapid pulse, pain under nipple—not much else except that he made the remark, "Doc, I've got it." There was a lot of "*it*" in that section that winter. This farmer had "been there" before, a few years earlier, and had his own idea as to the meaning of his symptoms. We agreed. He got some calomel and podophyllin, to effect all right, and aconite (Squibb's fluid extract) to be given according to temperature. He got the aconite all right.

I can summarize by quoting a remark of a brother of the patient less than a week later. He addressed me something like this: "Doc, you'll never amount to anything. A doctor that does not know more than let a pneumonia patient get well in a week will never make anything practising medicine."

That man had pneumonia. The pneumonia was aborted on the same lines that you have been advocating so long and earnestly.

It was not difficult for me to stop writing prescriptions after learning that I could obtain my old friends, and many new ones, in such usable shape as the granules.

J. H. FORMAN.

New York, N. Y.

### PNEUMONIA AND CROUP

When you sent me a copy of *CLINICAL MEDICINE* you asked me to write and tell you what I thought of the journal. I took advantage of your offer and subscribed for it. Now I can say that I think it is the best

regular journal published. I use alkaloids and Lloyd's specifics almost entirely. In fact, I don't like to risk any other preparations. I cannot see much difference in the action of alkaloids and Lloyd's specifics. They are both entirely reliable and the strength of the drug always the same. So a doctor is certain he will get the effect desired and can know what to expect. I have never lost a case of pneumonia and have had them at all ages from eighty years down to a few days old. I suppose someone will say I never had any hard cases, but I *have* had them. This winter I have had but two cases of pneumonia so far.

I have used calcidin in croup quite a little. In only one case has it failed me. In that case I gave the child over 20 grains of calcidin without a particle of effect. (It was not diphtheria, either.) I use a compound of stillingia, lobelia and oil of cajeput in glycerin. I can get relaxation much quicker than I can with calcidin. I apply it over larynx in children and seldom need to give anything internally. I rarely have any nausea or vomiting from it either. This is the way I have it prepared: Specific lobelia, specific stillingia, aa ozs. 2; oil cajeput, drs. 2; glycerin, qs. ad ozs. 6. Give one to five drops on sugar every ten, twenty or thirty minutes as needed. Also apply externally. In a majority of cases, however, calcidin acts nicely and is pleasant to take.

In my pneumonia cases I very seldom find much need of stimulants. I was much impressed with Dr. French's article in the December number, page 1438. I have always thought that alcohol and strychnine were antagonists and could never see why the majority of physicians gave them together. I think many pneumonia patients die because of their use. Strychnine arsenate given alone will work wonders. So will digitalin if indicated. I have never noticed any cumulative action from digitalin, even when given in erroneous doses. I think you are teaching physicians that there is something in therapeutics.

The direct action of remedies is the only method of practice if you expect good re-

sults. I believe in the prescribing of single remedies wherever possible. I very seldom use a prescription for a disease: every condition must be treated according to the symptoms. No two cases of pneumonia or typhoid fever can be treated exactly the same. I know a physician who treats all his typhoid fever cases with the same prescription. You know the result—the case lasts five to eight weeks, or the patient dies. If he would use direct medication and prescribe for specific indications the results would be far different.

I believe many cases of pneumonia and typhoid fever can be aborted, and the duration of all cases shortened very much. If I did not believe this, I could see no reason why people should call a physician in these diseases. I can agree entirely with Dr. Benson in his article on "Color in Diagnosis and Therapy" in regard to tongue indications for acids and alkalies. The indications are positive, and the results are always sure if indications are followed out carefully.

I have used the H-M-C compound in a few cases and have had good results. This is my first article to CLINICAL MEDICINE as I am a new subscriber. I think from looking over the outline that the postgraduate work will be excellent and anticipate both pleasure and profit from it.

H. G. PALMER.

Detroit, Mich.

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[We agree with Dr. Palmer that "many cases of pneumonia and typhoid fever *can be aborted*." That is just as true now as it was in Dr. Forman's experience (see preceding page) twenty-five years ago. We need gumption, grit and go-ahead—that's all. Don't believe it? Try this in pneumonia: Clean out, *thoroughly*, with calomel, podophyllin and saline; aseptisize with the sulphocarbolates; begin at once with aconitine, digitalin and veratrine, in sthenic cases, changing the veratrine to strychnine arsenate in asthenic; *go after your drug or remedial effects*. These are the fundamentals of your treatment. Others to suit your case. —ED.]



## CLINICAL · MEDICINE POST-GRADUATE SCHOOL *of* THERAPEUTICS

George F. Butler, M. D., Director  
Thomas J. Mays, M. D.  
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.  
William F. Waugh, A. M., M. D.  
Alfred S. Burdick, A. B., M. D.

### PART I.—LESSON THREE

#### ADMINISTRATION OF REMEDIES

##### HYPODERMIC MEDICATION

**The Hypodermic Method** consists in the introduction of the medicine into the organism by injecting it into the subcutaneous tissues by means of the hypodermic needle and syringe. This method of administration has many advantages: First, absorption takes place very rapidly. Second, absolute certainty as to the quantity of the drug affecting the organism. Third, the small quantity of the medicine required. Fourth, the additional advantage that by this method the activity of the medicament is not destroyed or the character of the drug changed by the action of the stomach-contents. Not all drugs, it is to be observed, are available for administration by the hypodermic method. The alkaloids are usually employed for this purpose, owing to the smallness and accuracy of the dose and their reliability of action.

The medicine to be used hypodermically must first be in solution and the latter should be of neutral reaction and freshly prepared. The best menstruum is distilled water; filtered spring water will answer quite as well and much better than distilled water which has been standing several days and frequently exposed to the air and so liable to contain fungi and

bacteria. It must be boiled in a silver spoon just before using.

**The Hypodermic Syringe.**—A syringe with a glass rod and glass barrel, accurately ground, is the best kind to employ. If carefully made it will not leak and is never out of order; those with metal barrels and leather washers dry out and are never in condition when required. The all-glass syringe, moreover, can be sterilized at any time, which cannot be said of other varieties. A barrel holding about 30 minims is the usual size. After filling, all air should be expelled. The solution should be injected *beneath* the skin, *not into* it, care being taken to avoid puncturing a vein.

**How to Give a Hypodermic Injection.**  
—The most suitable localities for the injections are the external aspects of the arms and thighs and abdomen, or any spot where the tissues are not bent or exercised. The skin of the part is grasped or picked up by the thumb and forefinger of the left hand and the needle sharply pushed well into this raised part, preferably above the finger and the thumb, so that the pressure of the fingers may prevent pain and hold the part steady. On the external aspect of the thigh, just in front of the great trochanter, there is an area of some

two inches square over which the insertion of a fine hypodermic needle is not felt, so barren is the skin of sensitive nerve filaments in that region.

The needle should always penetrate well into the loose connective tissues, so that the liquid injection will find lodgment in the relaxed and spongy subcutaneous tissues without separating the skin from its rather close adhesion to the tissues below or from the blood-vessels supplying it, for if separation occurs, an abscess may occur.

In preparing the solution for hypodermic injection it is preferable to use soluble hypodermic tablets. These are best dissolved in a teaspoonful of water, heated over a flame; after cooling, the solution can be injected without causing pain. Prompt action follows this method, accurate dosage is assured and disturbance of the gastric or intestinal mucosæ is avoided.

Furthermore, it may be said that in some instances it is of importance to take into account the specific local action of drugs like morphine, atropine, cocaine, theine, strychnine, etc., when given hypodermically. It has been fairly well demonstrated that the effects of these agents are concentrated around the point of their injection, and that they produce a more decided impression there than they do throughout the remainder of the body; and for this reason local disorders, like neuralgia, intestinal colic, reflex convulsions, local spasms, local paralysis, etc., are frequently best treated by injecting the medicinal agents as near the affected area as possible. For, aside from the more prompt and speedy relief which is afforded by this method, there are good reasons for believing that smaller doses when given this way will do the work of larger doses when introduced at indifferent points.

As a rule the dose employed for this method is 25 percent less than when given by the mouth.

Whenever hypodermic injections are used, they must be administered under strict aseptic conditions, applied to the syringe and needle as well as to the seat of operation. The contents of the syringe should, as a

rule, be absorbed very slowly into the tissues beneath the skin, giving time for the fluid to get through this part without rupturing the connective tissues. The syringe should be held steadily, and the needle not moved around, so as to avoid injuring the tissues. The piston should be pressed down slowly, and when the injection has been delivered, the needle should be quickly withdrawn and no attention should be paid to the few drops of solution which may follow it. Absorption is favored by gentle stroking of the area injected.

The very finest needle should alone be used, except in cases where the patient is suffering and liable to break the needle off by his movements. The point of the needle should be perfect and its surface highly polished. It is far better to use a new needle every day than to risk one's reputation for skill on a blunt-pointed and rough-surfaced instrument. After the injection has been made, the needle-point should be wiped and dried by the fingers before returning it to the case. The sebaceous matter on the fingers will keep it from rusting. As soon as practicable the needle must be boiled in alkaline water, dried with alcohol, and the wire inserted.

**Cautions Concerning Hypodermic Medication.**—As a general rule it is unwise to administer the salts of morphine or atropine hypodermically to children less than fifteen years of age. If cocaine is to be given hypodermically for the production of local anesthesia, the solution should be injected into the skin itself and not beneath the skin as with other drugs.

The chief dangers from hypodermic injections are:

First, the needle may enter a vein and the entire dose be carried at once to the vital centers. The danger of this accident can be lessened by withdrawing the needle a little from the tissues before injecting the solution. Wood says he has seen the injection of 1-2 grain of morphine cause all the symptoms of collapse within a minute, from this cause. (See also *CLINICAL MEDICINE*, pp. 400, this number). Should such an accident occur, prepare at once an injec-

tion containing 1-100 grain of atropine sulphate, to administer if dangerous symptoms arise.

Second, the solution or needle used may not be sterile and an abscess result. This danger of course can be avoided by taking the proper aseptic precautions.

Third, the injection of air into a vein may occur, so that it is well to see that all air is expelled from the syringe before making the injection. This may cause an air-embolism, with dangerous symptoms or even a fatal result as a sequence.

Some drugs are injected deeply into the tissues (parenchymatous injection) as, for instance, chloroform for sciatica and other neuralgias, carbolic acid for deep-seated inflammations, cocaine for local anesthesia.

**Vaccination** is a method of skin medication. In men it is best performed over the insertion of the deltoid and in females there or at the upper, outer portion of the leg. The thigh is troublesome to dress and necessitates greater exposure. The best instrument to scarify the skin is a fine needle which should be sterilized in a flame before using. The portion of the skin to be vaccinated should be thoroughly cleansed by hard scrubbing with soap and water. A few scratches, four to six, one-eighth of an inch apart and one-third of an inch long, are then made and the vaccine is then rubbed in thoroughly with a sterilized wooden toothpick or with a glass of the capillary tube. The glycerinated bovine lymph, put up in capillary tubes with a small balloon at one end which holds the virus, is the best form of virus to employ.

**Hypodermoclysis** is a method of applying remedial agents through the skin. The so-called normal salt solution is usually employed. This contains 0.6 percent—or one dram of pure sodium chloride (table salt) to a pint of boiled and filtered water. Thorough asepsis is necessary in the technic. An ordinary fountain syringe with a moderate-sized needle is all that is required. The solution is best used at a temperature of 110° to 115° F., from 4 to 8 ounces being employed. The fluid should be injected into the anterior wall of the abdomen or in

the ilio-lumbar region above the ilium and below the ribs. Hypodermoclysis is very useful in conditions of shock, hemorrhage, diarrhea, uremia, and in toxic conditions generally.

#### INTERNAL MEDICATION: DOSAGE

The term "dose" is usually accepted in two senses. It may mean a quantity of medicine taken at once, or also the quantity taken within twenty-four hours. To neither of these acceptations should there be rigorous adherence. For, if it is possible to fix as a dose the quantity of chloroform which is taken with each inspiration, or the quantity of mercurial ointment which is absorbed by each act of friction, or the exact quantity of a purgative agent in each glass of purgative lemonade, we cannot understand, on the other hand, why the accumulated doses should be estimated for each twenty-four rather than for each forty-eight or each twelve hours. For active remedies the term is usually understood in the first of the two definitions; but the confusion that exists well shows the want of precision and of clear knowledge which is indicated by the term. Notwithstanding this, there is nothing that is more important, for all depends upon the dosage and without it we should run the risk of going astray into the region of homeopathy or into the dangerous confines of toxicology. The only definition which can harmonize these two conflicting ideas is one which considers the dose as *the quantity of medicament which is intended to produce a precise effect*.

Even this definition is somewhat vague, especially if we consider the necessity of expressing it in units of weight and measure. In fact, not only may the end for which the medicament was given fail of achievement, but the effect may not be apparent, for that effect depends essentially upon the dose. There is, therefore, a vicious circle, in which one seeks to determine the effect by the dose, and the dose by the effect, a problem in which the product only serves to indicate to us the factors.

This method of considering the dose is, therefore, very arbitrary, in other words,

is incompatible with the strictness which its object requires. But in accepting it provisionally, suppose one administers a dose of a certain substance in order to produce a certain effect, and that the quantity which is necessary to obtain that result should be calculated in advance; would the effect appear, of necessity: would the result be produced with certainty? Certainly not, even if we admit that the economy would always act in the same manner.

**Retention and Absorption.**—As a matter of fact, there can be, and there always is, a considerable difference between the quantity of the medicament which is taken and that which acts at any given moment upon the parts to which it is directed. There are then differences in the degree to which medicines are retained, differences as to their solubility. There are those which take place at the time of absorption and those which occur within the circulation, or while the medicament is *en route*. As to the first, we find that in certain cases of gastric irritability the whole, or nearly the whole, of the dose may be ejected by the act of vomiting. We know also that often in such diseases as typhoid fever the remedy may traverse the entire digestive canal without undergoing the least alteration.

**Solubility.**—The solubility of the dose is a matter of no less inconstancy, and one often finds in the intestines at autopsies large portions of medicinal substances which have failed as to satisfying this first condition to absorption. Absorption is eminently a variable condition, and it is only the fact that it is dependent upon life which makes it different from the phenomena of osmosis, and prevents us from counting upon identity as to results. It varies with the condition of the absorbing surfaces, the density of the solution, the state of relative fulness or emptiness of the vessels, the degree of saturation of the secretions, etc. The passage of medicaments to their field of operation also varies with circumstances, which it is not necessary to enter more fully into here.

We learn therefore that medicaments which are compelled to experience so many

vicissitudes before reaching their destination, can never have an effect which is proportional to the dose which is absorbed. Between the quantity of the dose which is employed and that which is used with advantage there is such a difference—and such a varying one—that, if we consider the dose as the quantity of medicine which is administered, we expose ourselves to the unlooked-for, the uncertain, the erroneous. Can we foretell with accuracy all the circumstances in nature which will have a bearing upon medicaments so that we can estimate the loss which is experienced by the dose which is given? Can we in the most simple condition, vomiting for example, estimate the quantity of the medicament which has been rejected, so as to replace it and complete the necessary dose? And if the result need not be mentioned in so simple a condition, what shall we do in the more obscure and complex ones? Nothing, and it would be foolish to attempt anything of the kind.

**What Is a Dose?**—What, then, is a dose, in its most rigorous acceptance? After what has been said it is plain that it must be simply *that portion of the medicament which acts*.

Now, as the object of administering a remedy is always to obtain a certain result, it may be said that *the therapeutic dose is that portion of a remedy introduced into the blood which is capable of producing a determined action*.

It would be absurd to admit that the result can be produced, whatever be the dose of the substance. Recent observations show that the result always depends upon the dose. One may be deceived in the interpretation of phenomena observed, but it is certain that one gives no remedy without hoping for some result from it. We have seen that every modification produced in the organism by a remedy is called the action of the remedy. Whether this action be latent, visible, mild or violent, useful or harmful, it always exists when an agent enters into relation with a living element. It differs, then, from the effect. The *effect* is the action of the medicament carried to

a certain degree, or intensity, and always gives rise to an apparent modification, whether that be physical, chemical, vital, or with reference to results, purity. The effect, therefore, depends directly upon the dose.

Without stopping to consider the effect in the element alone, we will study it in the organism, and, as the vehicle of the medicament is almost always the blood, and its most medicinal actions are accomplished by a modification of the nervous system, we may, in general terms, offer this principle:

*The effect depends upon the quantity of the remedy which affects the vitality of one or more nerve-cells, the remedy being transmitted by means of the blood-current.*

Thus we shall better understand that, in addition to determining the effective portion of the dose, we also ought to take into consideration that portion of the medicament which is eliminated and consequently cannot affect a second time the cells to which it was carried by the blood before elimination occurred.

In reality the dose varies with each systolic movement of the heart, because it depends partly upon the quantity absorbed and partly upon the quantity eliminated. Suppose a single dose to be introduced into the stomach, absorption does not take place all at once; there will therefore be received by the blood a series of doses which will differ at each moment as absorption goes on. If elimination is equal to absorption, the dose will be constant; if the former be less active, the quantity of the medicament in the blood will increase as long as any of the substance originally ingested is not absorbed. If, on the contrary, elimination is more active than absorption, the dose of the medicament in the blood will gradually diminish. If we cannot calculate in advance the quantity of the remedy which will be absorbed, no more shall we be able, for similar reasons, to estimate that which is eliminated. As the active portion of the dose depends directly upon the two factors of absorption and elimination, and as these are absolutely undeterminable, the proposi-

tion is justifiable that *it is impossible to calculate the active portion of any dose whatsoever.*

**Diverse Properties From Different Doses.**—Experience is in accord with this conclusion: We know that at each step practitioners meet with surprises and with unforeseen results from inability to adapt the doses which have been prescribed to the abnormal necessities of the patient. That which will soothe one patient may excite another. That which overheats may also refresh, just as that which refreshes may overheat. It is in this way that the same drug combines several properties. In support of this statement let us call attention to the tartrate of antimony, which is now a purgative, now emetic, now diaphoretic, in spite of posological teachings. Other testimony could be added, but it will suffice to refer to the different idiosyncrasies, which are simply cases in which there is now great impressionability, and again an accumulation of doses.

There are cases of extraordinary tolerance in which one or two grams of opium have been given with impunity within a short space of time, or the wine of colchicum by the glassful at once. Such is the extreme uncertainty as to the results which are to be obtained even with moderate doses, and also the variety as to the opinion concerning the properties attributed to medicinal substances. There can, therefore, no longer be any doubt as to the agreement of the teaching which is drawn from the facts, with the conclusions drawn from the principles which have been enunciated. We may, therefore, consider that the so-called *maximum* and *minimum* doses have undergone condemnation.

**"Maximum" and "Minimum" Dosage.**—The facts which have been cited should have long since convinced physicians by their eloquent obstinacy that the principle of the *maximum* and the *minimum* could not be considered the true rule for dosage. Common sense ought to have told us long ago that the doses prescribed in the formularies are based only upon experience in certain cases, or upon experimentation made upon

animals. From such data, however, the first author who wrote upon the posology of different substances started, and others have simply copied after the first. If any fact went beyond the well-defined limits, it was wont to be explained by the defective quality or the method of preparation of the drug, or by an idiosyncrasy so rare that one would not even take the pains to investigate the matter and see if it were really less rare than had been believed.

It has already been remarked that a drop of laudanum may have an effect on one person which might be represented by the value one, and in another by ten. It has been observed that an occasional insufficiency of the eliminative organs multiplies the energy of the substances absorbed, that poisoning may take place from minimum doses, and no appreciable effects be obtained from maximum ones; but, notwithstanding these facts, we seem to persist in preferring old methods, and in refusing to seek for the true significance of these numerous exceptions. The bad results from this form of practice finally became so manifest that it is no longer possible that a remedy for such a degree of uncertainty should remain undiscovered.

**Dosage "to Effect."**—What is that remedy? Nothing could be more simple: It is the old case of the egg of Columbus. If one desires to obtain the effect of a medication it must simply be given to *the point where that effect is obtained*. But, in order that the effect may be produced, it is necessary that the desired intensity of the remedial action be not exceeded; it is also necessary that the quantity of the drug in the circulation should not vary by too much or too little from the desired quantity. Furthermore, the absorption should be rapid, elimination readily accomplished, and the result promptly obtained.

Hence the necessity of using small quantities, perfectly uniform in character, of energetic medicaments, which should be readily soluble and perfectly tolerated, which being introduced into the circulation shall gradually accumulate in the blood until the active dose is reached. Thus are we led to choose the alkaloids and other fixed representative

principles, and to give them in granule form, in order that the patient may experience the minimum of annoyance in the administration of small and frequent quantities. Clearly *effect*, under these conditions, means a result which is perceived by the patient or appreciable to the physician. Any other results must be illusory.

**Accumulation.**—In ordinary practice doses are frequently measured without accuracy, and repeated without regard to any rule; the drugs may accumulate in the intestine, enter the circulation without our knowledge, or be eliminated without having produced any effect. Everything in ordinary practice conduces to such results. The volume of the drug may be considerable, and it may be of a complex character and not readily soluble. Its absorption, therefore, often is irregular, slow or altogether wanting, while the large size of the dose may readily cause an accumulation in the blood, with serious consequences, if elimination is improperly accomplished.

This is the reason why many patients are sufferers from the use of substances which are apparently inoffensive, notwithstanding the fact that the most active substances sometimes traverse the economy without producing the slightest trouble. The most harmless substances are sometimes objected to on the ground that they have a poisonous action. This is certainly true of them in some cases in which the physician has neglected to take into consideration the condition of the eliminative organs. In yet other cases the condition of these organs could not be foretold. Sodium sulphate and sodium salicylate, for instance, which are usually regarded as harmless drugs, may give rise to the most unfortunate surprises. On the other hand, apparently toxic quantities of alkaloids are sometimes absorbed by patients without producing violent effects, in spite of the dread, which is felt by those who dare not use them and who forget that mildness and energy may go hand in hand. This irregularity in the effect of the alkaloids in cases which are characterized by a very slight impressionability or by an unusual readiness of the eliminative func-



tions, can only be explained by the method followed in administering them.

Accumulation may be the result of the total quantity of the doses taken or of the quantity of the doses used with profit by the economy. Accumulation by means of the doses taken is a result which cannot be foreseen. It may happen that several doses, given perhaps at long intervals, are added one to another and retained in the digestive canal, where they may be absorbed or eliminated, entirely or in part. If absorption is total and continuous, the effect will exceed the calculations which have been made; if the accumulated doses are rejected entirely, there will be no effect; in yet other cases the effect will depend upon the proportion between absorption and the activity of elimination.

#### **How to Prevent Accumulation.**—

Accumulation from doses which are efficient results when the elimination is insufficient as compared with absorption. The activity of these two functions, however, is not susceptible of calculation; we must, therefore, always proceed with very small doses in order that accumulation may never become perilous. The medicament, as it accumulates little by little in the blood, will produce an intensity of action gradually noticeable, which will increase by degrees, until the *effect*, that is, the point for which we are striving, is obtained. When this effect has been obtained, it is time to suspend or diminish the doses; and, if the doses are very small, soluble, and readily absorbable, absorption will cease when the administration of the medicament is interrupted; likewise, accumulation in the blood will be arrested, and the corresponding energetic action of the medicaments. Elimination continuing, the activity of the dose will continue to diminish until the remedy is entirely removed from the organism.

It is, therefore, evident, that while in usual or ordinary practice accumulation is an undesirable event, in this method of administration it is the indispensable one, because by it alone can the effect be obtained; and, according as this effect is appreciable and proportionable to the accumulation shall we be

able to excite, increase or diminish it, as the indications may present themselves.

**Accumulation of Effects.**—Aside from the accumulation of the doses, we may admit also an accumulation of effects, or medicinal erethism, in cases in which, the active dose remaining constant, the impression produced is maintained or is exaggerated by a repetition of the impressions caused by the agent. In such a case, also, this method of administration offers perfect security, because the effect is increased only to the necessary limit, since absorption is continually equal to elimination; and, at the moment when absorption ceases, the elimination continues, and the active dose is diminished in its turn, so that partial effects can no longer be increased. If, on the contrary, absorption exceeds evacuation, the accumulated effects will only produce the total effect more speedily.

**Saturation** can only be understood in two ways:

First, it is either the accumulation of the remedy in the blood in such quantities that its accumulation is no longer possible, from which one of two things happen: (*a*) an insufficient effect is produced (for if it had been sufficient, the doses would not have been repeated until saturation) which will remain stationary, because the active dose cannot be increased, absorption being suspended, and then this effect will indicate *ipso facto* that new doses would be of no use; or (*b*) no effect is produced, and, as saturation prevents further absorption of the medicament, we are reminded that we must try some other substance as a synergist.

Or second, saturation exists in the effects produced, that is to say, it is useless to increase the dose, the organism will no longer react to its influence, and the medicinal energy will not reach a degree sufficient to produce the desired effect, still less to produce any phenomenon of an alarming character.

But, though this element has given negative conclusions, some other element will respond to the indications, and we shall thus be warned not to insist upon it. The effect we seek after has not been produced, but we

are thus warned to be upon our guard. When this saturation of effects occurs, it may give rise to failure of this form of treatment as well as of the usual form or dose.

However, if the desired useful effect is not produced, but some unusual manifestation is apparent in its stead, which method will have shown the less foresight? Will it be that of small, repeated doses, which produce an effect little by little with gradually increasing intensity of medicinal action, or that of the large dose, which roughly provokes it, abruptly and intensely? If this unusual effect, which could not be foreseen, is an evil, under what condition shall we be able to control it with the greatest facility? Will it be when it exists at its maximum from the beginning (as when it results from the large infrequent dose), or when the evil presents itself slowly and is aggravated only by our obstinacy? The difference between the two methods is too evident for further comment.

**The Ideal Dosage Method**—The only way, therefore, to proceed with accuracy, with assurance, and without danger is to give, at short intervals, small doses of simple substances which are readily soluble and have clear and precise effects. In this way we can correct any possible variability in the given pharmaceutical preparation, uncertainty as to the activity of absorption, ignorance as to the state of elimination, and we can compensate for inconstancy in the vital impressionability. The different conditions may vary as much as they will, but we shall always reach the effect. Can this effect be injurious? We have already seen that it can not, for in place of following any arbitrary rule, in place of calculating the dose in accordance with the inflexible indications of the formularies or our own vague inspirations, we allow ourselves to be guided by vitality itself.

This element does not tell us how much of the medicament must be given in order to arrive at precise results, but it does tell us to stop when the end has been obtained. So a fireman, though he may be ignorant as to the amount of coal the furnace of his locomotive will burn, does not give himself

concern on that account, for he intrusts the regulation of that matter to his infallible manometer. When the desired pressure of steam is indicated, he ceases to apply fuel, conscious only that he used what was indispensable, whether much or little has been burned.

### **This Method Satisfactory and Safe.**

—While it is stated that the administration of drugs by this method can never produce harmful results, it is of course presupposed that the result will be such as would be expected from the attentions of a physician who is skilful and experienced in the use of drugs. If a physician has administered an emetic to a point at which it produces vomiting, and bad results follow the act of vomiting, would it be right to say that the effect of the medicament has been harmful? Assuredly not. The fault has been in the method of interpreting the indications.

A medicament which gives the exact result which is expected from it, neither more nor less, is a medicament which has been accurately administered. Such results constitute the great merit and the incomparable value of this method. It is the only one by which the caprices of vitality are subjected to the intelligent will of the physician. And not only is this method exempt from dangers, but it is the only means which the physicians who practise the old method of administration have for avoiding dangers.

Now, it is impossible to understand therapeutics correctly if these two conditions are separated. In other words, *the remedy ought always to be effective, never harmful*. One must always turn to this form of medication, if he desires to make himself truly useful in his medical service.

In ordinary practice, when one wishes that a drug should be effective, and an attempt is made to render it active by giving it in small and repeated doses until the required effect is attained, he should not be satisfied with the common method of giving now and then any-size dose which the inspiration of the moment may suggest. If, for example, the case be one in which to obtain anesthesia from the use of ether or chloroform, to treat a threatening asystole, to combat the effects

of inanition, to calm a violent pain, to dispel a spasm which threatens life—if the question be to excite vomiting, or to produce a diaphoretic or hypnotic effect—do we not have recourse to the use of small doses, which are repeated until the effect is produced?

Heart tonics, like all other remedies, present two distinct aspects; if the dose is carefully measured, good therapeutic results will follow; if it is excessive, the scene will change, and a toxic effect will appear.

**The "Sufficient" Dose.**—Therapeutics always aims at a result. The result can only be obtained by a dose which shall be sufficient. The *sufficient dose* cannot be established in advance even by calculation, by experience, or by inspiration. We must give the remedy until the *sufficient result* is obtained, without a special regard to the quantity taken, but only to the objective and subjective modifications which an examination of the patient will indicate. Experience and calculation can only aid us in establishing the *initial* dose, the fractional part of a complete dose which should serve to initiate the medicative action, and which, when repeated with suitable frequency, will constitute the sufficient accumulative dose. The initial dose should never be capable of producing any toxic effect for, if it did, we should fall into the dangers consequent upon excessive dosage.

By giving remedies in this manner, it is not necessary to be influenced as much as we have formerly been by various circumstances such as age, temperament, habit, sex, etc.

## PHYSIOTHERAPY

### HYDROTHERAPY (Continued)

**Electrical Effects Involved.**—The peculiar phenomena which take place when temperatures of different degrees come in contact with each other, have been observed and analyzed by physicists and physiologists. In the domain of nature these phenomena present themselves in the form of meteorologic changes, such as air currents (wind, storm), rain, snow, etc. The activity of the force, or dynamic element, which follows the contact of volumes

of air of different temperature, is analogous to what takes place when air or water carrying a temperature higher or lower than that of the living animal body comes in contact with the skin of the body.

All physiologists recognize the existence of a peculiar active element under these conditions which is distinctly magnetic or electrical in character. This force travels in the direction of or toward the *lower* temperature. If hot water is applied to the skin, this magnetic or electrical element, or force, travels *toward* the body, i. e., toward the lower temperature, which in this case is the temperature of the body. If the application is one of cold air or cold water, the direction of the force-current would be reversed, i. e., *away from* the body.

Upon this theory many effects of heat and cold can be explained which heretofore have been classified under the capacious and vague head of reflex effects. The suddenly induced deep respiration which follows a cold douche (e. g., dashing cold water against the patient's nude back) is usually called a reflex phenomenon, whatever this means.

Du Bois Raymond and other physiologists recognize the existence of the magnetic or electrical element in the living body in a state of latency. When the equilibrium is disturbed by a thermic shock, e. g., a cold douche, the force which up to this time was neutral (potential, or latent) becomes active. The flow of this energy being in the direction of the lower temperature (i. e., toward the cold water) there is an escape, a loss of this vital element. Nature makes a violent effort to equalize matters by increasing the physiologic effort of supplying oxygen. Hence the intensified respiratory movement. Hot applications produce effects which are opposite to those mentioned. This phase of our subject is of some importance in view of the frequent references to it in the writings of recent hydrotherapeutists, who explain the *e-nervating* and *in-nervating* effects of water applications in the manner indicated.

**Endosmotic Effect.**—There is one action of water which is independent of the

temperature of the water. No one doubts nowadays that water is absorbed into the skin by a process of *endosmosis*. It is assumed that by such absorption the proportion of the watery elements of the tissues of the skin is increased and a quasi-edematous condition of the nerve-endings in the skin is produced. When under these conditions impulses are received by the skin-nerves from the outside, the edematous nerve-endings respond sluggishly and transmit these impulses less promptly and less perfectly than under normal conditions. In this way the nervous system is less frequently and less intensely acted upon. This explains the sedative effect of a long-continued immersion in water of moderate temperature (a lukewarm bath lasting from ten to twenty minutes). In order to produce this endosmotic effect it is plain that there must be no thermic shock. The temperature of the water and that of the skin must be approximately the same.

**Reaction.**—On a previous occasion (see page 280, February number) we considered the physiological meaning of *reaction*. If we make a short application of cold water to any part of the body-surface, the arteries of the region will contract, causing the amount of blood to be lessened, blood-pressure correspondingly diminished and nutrition to become less active. A relative anemia supervenes in the “primary area.” We have seen that a coincident hyperemia must take place in the contiguous deeper structures into which a portion of the cutaneous circulation has been forced (“primary hyperemia in the secondary area”). The moment the effect of the cold application passes off, the primary area becomes actively hyperemic and the secondary area correspondingly anemic. The physiological process by which this reversal of conditions is brought about is called “reaction.” It is the pivotal point upon which hydrotherapy as a science rests.

We can readily understand that the intensity of the effect will largely depend upon the size of the surface to which an application is made. If the primary area is as large as the palm of the hand, the action

upon the blood-supply of the region treated and of the secondary area which is affected would of course be insignificant if compared with the effect which would be produced if the primary area were the entire body-surface. In the latter case the blood-mass of practically the whole body would be involved by the “reaction.” Let us suppose that the application is made to the lower extremities. After the “reaction” has taken place, there would be a marked hyperemia in the lower extremities. The upper parts of the body have yielded a considerable amount of their blood-mass to fill the widely dilated vessels in the lower extremities. Thus we have drawn blood away from one region and drawn it to another region. This is what hydrotherapeutists call *derivation*, which is probably the best English term for the very expressive German *ableitung*.

**Derivation** is to the practice of hydrotherapy what reaction is to its theory. The proper application of the principle of derivation enables us to deplete parts that are congested and to increase nutrition in regions that are in a condition of subnutrition (suboxidation, venous hyperemia, passive congestion).

The happily invented term “*bloodless venesection*,” which has recently been widely used in a more or less pertinent manner, was coined by the great empiric Vincens Priessnitz, father of the crude prototype of modern hydrotherapy.

Derivation enables us to perform “bloodless venesection.” We can unload congested lungs by directing the blood-mass, or at least a considerable quantity of it, into different channels, for instance into the lower extremities, if we make the latter the “primary area” for our hydrotherapeutic application. The upper parts of the body, including the lungs, would be the secondary area, or the scene of the “secondary anemia.” The congested lungs would yield some of their blood. The inflammatory process would be reduced in its intensity or perhaps entirely starved out like a fire which gradually goes out for want of fuel. In the case mentioned the thera-

peutic effect is produced in the secondary area. In other words, the actual application is made to a region which is not the seat of disease, but at a considerable distance from the diseased or suffering part. This is characteristic of many very useful hydrotherapeutic applications.

On the other hand, we may make a hydrotherapeutic application to the back for the relief of muscular rheumatism (lumbago). The "primary area" is in this condition the seat of the disease. There is suboxidation in the lumbar muscles, retarded metabolism, retention of the waste-products, gaseous and liquid, carried by the venous circulation. The nerve-filaments in the affected area are crying out for healthy blood. A suitable hydrotherapeutic application increases the arterial supply, stimulates the lymphatics, sets in motion the nearly stagnating venous blood-mass, regenerates the metabolic process in the whole lumbar region. The toxic elements are carried away and the pain is relieved.

**Reactive and Nonreactive.**—Enough has been said to explain the division of all hydrotherapeutic applications into those that are *reactive* and those that are *nonreactive*. Reactive applications are made by cold water or a cold-pack for a few moments, the reaction following causing a secondary intense hyperemia in the primary area. The therapeutic effect aimed at may occur in the primary or in the secondary area according to the intentions of the operator.

*Nonreactive* applications are made by the continuous use of heat or cold. The primary effect is immediate and continuous. There is no reaction. If a continuous cold application is made, the contraction of the vessels is continuous. If a continuous hot application is made (hot-water-bottle, flax-seed poultice) the hyperemia is immediate and continuous. For reasons which will become apparent later on, the nonreactive applications are vastly inferior to those which are characterized by reaction. The great objection on physiologic grounds to continuous applications (nonreactive) of heat or cold is the more or less complete

exhaustion of the vascular tone which invariably follows applications of this kind. In conditions characterized by a weakened tendency toward repair (*vis medicatrix naturæ*) vasomotor atony is a factor to be reckoned with.

Let me briefly consider the experimental proof showing that derivation is in reality a demonstrable physiologic fact. Winternitz measured sphygmographically the radial blood-pressure of patients sitting in hot or cold water, and found that the pulse-wave was directly affected (exaggerated or depressed) by contraction or dilation of the vessels in the parts immersed. He even demonstrated the effects on the size of the arm while the patient was sitting in a hot or cold bath. Schueller, a German physiologist, trephined rabbits and exposed the brain-mass. Whenever the body of the animal was immersed in hot water, the meninges became pale and looked shrunken. Immersion of the animal in cold water caused the meninges to look hyperemic. Observations on human subjects who were treated with hot or cold applications to the abdominal wall yielded analogous results. All these proofs corroborate the tremendous control which we have over the local and general circulation by judicious application of the principles of "derivation."

#### A FEW WORDS FROM THE FACULTY

New students are still being enrolled. That's right. We want many more and there is plenty of time for every one to get in. The fact that you are two or three months behind need not make the slightest difference. Only the more quickly you commence the easier it will be for you to finish up the work you are behind on. Every reader of CLINICAL MEDICINE should also be a student in the Post-Graduate course. Now, don't say you are "too busy." A few minutes a day will be enough—and how can you spend them better?

We have been exceedingly pleased with the enthusiasm shown by our students. Many of the papers sent in this month are splendid. Really we think the average better than last month—possibly because

we have not quite so many questions to answer and there is more opportunity to develop every subject. A number of the papers are perfect.

We want to make a number of requests—little ones. If you will give them some attention it will simplify our work very much, and looking over several hundred examination papers every month is by no means an easy task.

1. Write on paper of fairly large and uniform size—say “foolscap” or letter-head size.

2. If you have a typewriter use it, but use open spacing. Leave good wide margins.

3. If you write, please write plainly. Better use ink, though we can get along very nicely when the lead pencil is used, providing it is *well* used.

4. Don't roll your manuscript. Send it in an ordinary large-size envelope, folded as few times as possible.

5. If you have original ideas about anything, or if you do not agree with the author of the lesson, let us know. We want to bring out original ideas, differences of opinion, personal experiences, and helpful suggestions.

6. Be sure to *sign your name* to your examination paper. We have several papers on hand that are unsigned. If you have not received your grades you had better drop us a line. Perhaps this is the explanation.

#### COMMENTS ON THE LESSON

**How Counterirritants Act.**—Dr. H. N. Freeman quotes from two well-known works on *materia medica* statements which are exactly opposite as to the way in which counterirritants act, one author ascribing the effect to a change in the blood-current, the other calling the action “a reflex nervous one,” pure and simple. As we explained in the text, the action is by no means well understood. The good effects of counterirritants are, however, distinctly intelligible by the law of Schroeder-Van der Kolk, that the vascular supply of the deep-seated part is derived from the same arterial trunk as that of the superficial part. This also holds

good of the nervous distribution; as the costal pleura and skin of the thoracic wall are alike supplied with blood from the intercostal artery, so they are furnished with their nerve-supply from the intercostal nerves. In the articulations the deep-seated and cutaneous nerves and vessels spring from common trunks. Therefore the application of a counterirritant to the peripheral distribution of a nerve or artery exercises an effect upon the corresponding deep-seated termination.

In this connection there is a certain analogy with the so-called derivative action of various remedies. Thus, any measure whereby the blood can be drawn into a part distant from the congested part gives relief at the affected point. The mesenteric circulation is a blood reservoir, which may be frequently used as means of regulating the blood supply. The almost instant relief from headache which is sometimes experienced from taking food is due to dilation of the mesenteric vessels under the stimulation of the food. The viscera may be reflexly influenced by counterirritation over certain areas, as, for instance, the brain by applications to the head, neck, face, hands and feet; the nasal mucous membrane by applications to the neck, face, upper dorsal spine, hands and feet; the stomach by applications to the lower dorsal spine and the epigastrium; the kidneys by applications to the lumbar region, the lower portion of the abdomen and the feet; the bowels by applications to the feet and the abdomen; the bladder by applications to the feet and the lower abdomen; the liver by applications to the lower right chest; the spleen by application to the lower left chest; the lungs by applications to the chest, the side and the upper dorsal region; the uterus by applications to the lumbar region; the abdomen, the inner surface of the thighs, the feet, and to the cervix uteri through the vagina.

We know that counterirritation may exercise a beneficial effect in cases of inflammation, even while the vascular supply of the inflamed part is not derived from the same arterial trunk as is that of the cutaneous surface operated upon. But while admitting

this we must own the *modus operandi* is far from being so clear, as it is in those cases where the common vascular and nervous supply exists, as in counterirritation in inflammation of the pleura, peritoneum, or in those more chronic affections of the joints, where there is deep-seated hyperemia, which not rarely produces permanent disability of the diseased limb from the continued vascularity of the epiphysis, so-called reflex action, whatever that is, undoubtedly plays an important part in counterirritation. It is indeed by first recognizing the fact the good does actually result from these therapeutic measures, that we should be led to investigate their working and then perhaps some day even understand how the results are achieved.

**Indications for Different Counter-irritants.**—No special comment needed on this question, which was answered carefully and correctly by most students. Dr. James R. Bloss of Huntington, West Virginia, makes the following "caustic" comment: "Among the indications for caustics the text says, 'to open abscesses.' I have always regarded a sharp-pointed scalpel better 'therapeutics' in such cases." Score for Dr. Bloss!

**Linseed-Meal Poultice.**—Dr. T. H. Line, Marquette, Nebraska, says: "With due respect to the author of the text it seems to me that his linseed-meal poultice is nothing more nor less than a hot-water bottle. He gets the effect of the heat and practically nothing else. I have used the bag filled with hot oats many, many times, and with benefit, but I did not use the oats expecting to extract anything medicinal from them, but simply as a medium to hold the moist heat. In this case two bags were used, alternately, both filled with oats, thoroughly boiled and saturated with boiling water; while one was applied the other could be heating. But I use flaxseed as a poultice because I believe there is medicinal virtue in the oil and that it is soothing to the skin if nothing else, and I believe that the only way to get the full virtue of it is to apply it directly to the skin. It is true that it can not be applied as hot as in a bag, but

as a rule I believe it will give better results. The oil comes directly in contact with the pores of the skin and is not filtered through several layers of cloth. I have done some experimenting along this line and it will take something more than theory to convince me that flaxseed poultice applied directly to a boil will not favor suppuration more than flaxseed in a bag or any other hot application. I prepare the flaxseed much as described for the bag, spreading it upon a cloth an inch or two thick and cover the affected surface as completely as possible. Thus, with a boil on the back of the hand I cover not only the boil but the entire hand."

**Ointments and Pastes; Best Vehicles.**—An excellent answer to this question is that of Dr. M. D. Roberts of Hancock, Michigan: "*Ointments* are oily substances which are applied to the skin by rubbing; they may be either soft or solid but become liquid upon being rubbed into the skin. A *paste* is not intended to be used as an inunction but to be applied to the irritated surfaces of the skin as a protective or adhesive dressing. Pastes are prepared with gums, lead, dextrin, glycerin, kaolin and other substances. (b) The paraffins are the best vehicles for ointments intended for the scalp. (c) Petrolatum is the best vehicle for an ointment intended as a protective. (d) Lard and hydrous wool-fat are the best vehicles for ointments when their medicinal ingredients are to be absorbed. (e) Colloidion can be used as a vehicle when a prolonged protective or absorbent action is desired." Several suggest the value of the plaster mulls when a prolonged action is desirable—a most excellent suggestion.

**Fundamental Conceptions of Therapeutics.**—These are, as stated in the text: (1) Stimulation or sedation; (2) combating of invading parasites; (3) elimination. Says Dr. James McMillan, Tyrone, Oklahoma: "I like your classification. It covers the *in-take*, the *in-make*, the *out-take*, three conditions of yours." That's cleverly put indeed. These fundamental conceptions will be taken up more at length later in the course.

### Intestinal Autointoxication.—Dr.

Roberts, quoted above, gives the following list of diseases and disease-conditions referable to gastrointestinal autointoxication: (a) Mild intoxication—drowsiness and lassitude after a full meal; (b) severe constitutional disturbances of infancy and childhood; (c) migraine, periodic headaches, neuralgias, and the gastric crises of tabes dorsalis; (d) nervousness, hypochondria, dizziness, insomnia, irritability; (e) tetany, infantile convulsions and fevers of childhood; (f) uremia and eclampsia; (g) perhaps epilepsy, periodic paralysis and pseudo-paralysis; (h) Thomson's disease and pseudoasthma; (i) eruptions upon the skin after certain food; (j) acute polymyositis; (k) coma in cancer, anemia, nephritis, cirrhosis and tuberculosis; (l) chlorosis, pernicious anemia, leukemia; (m) acetone-uria, cystinuria and oxaluria—autointoxication in the urinary tract. From these examples one can readily see the absolute necessity for thorough elimination in the majority of diseases; not merely elimination but the subsequent remedial means to keep the gastrointestinal tract in a salutary condition after all toxic contents have been removed."

### Advantages of Small-Repeated Doses.

—These are nicely epitomized by Dr. W. I. Power of Philipsburg, Montana: "(1) We avoid danger of toxic doses; (2) drug effects are produced more quickly than by larger doses taken at long intervals; (3) as soon as the desired effect is obtained we can stop or give just enough to maintain that effect; (4) the small doses are more easily taken, especially when given in the granule form; (5) small doses have a stimulant effect, while that of the maximum dose is sedative; (6) with the small repeated dose we can watch for any idiosyncrasy and stop before any harm is done."

Dr. R. W. Halladay, Hurry, Alberta, Canada, puts it well, as follows: "(1) Absence of nauseating dose; (2) personal idiosyncrasies may be noted before harmful effects are evident. This naturally tends to make the physician more familiar with the physiologic effects of each drug, making

him better informed as to its action, so that he becomes a better therapist; (3) as he becomes more familiar with each drug he tends more and more to the use of single principles to effect, while the use of large, infrequent dosage is almost invariably associated with polypharmacy. To the dispensing physician this means a smaller outlay for drugs; (4) the effect of the drug is not spasmodic but continued; the drug effect is carried to a certain point of intensity and there sustained—that is, the therapeutic (curative) powers of the remedy are utilized, the toxic avoided. Thus, if the exact remedy indicated is not selected and the first great object of treatment (to do good) not reached, at least the second (to do no harm) is realized; (5) minute doses of any powerful drug are stimulant to the vital powers, large depressive."

### Physiological Effects of Cold.—

Dr. M. J. Dowd of Thompsonville, Conn., gives the following: "External applications of cold water abstract a portion of the body heat, lower surface temperature and depress the cutaneous nerves, producing spasmodic breathing and quickened pulse. The cold contracts the blood-vessels, lessening the amount of blood to the parts and by acting on the cutaneous nerves reduces the sensibility and thus produces local anesthesia. If body vigor is good, reaction occurs, the superficial vessels again filling with blood; there is a general tonic effect on muscular power, circulation and breathing, as well as upon the nutritive processes. If reaction does not take place a secondary chill occurs and serious depression results." That covers the ground well. The essential points to remember are (1) that the mere abstraction of heat, while often desirable, is not the most important action of cold water; (2) that what we most desire is the *tonic* effect which strengthens all the vital processes; (3) that without proper reaction we get no tonic effect; (4) that friction or brisk rubbing hastens the reaction and should be associated with the cold application; (5) that when reaction does not occur promptly (shown by the "secondary chill") the cold application is harmful.



## RESEARCH QUESTIONS

**What are the Best Counterirritants?**

—One of our students gives the following: "Mustard is a domestic remedy that has been used for years as a counterirritant. The properties of mustard depend upon a volatile oil. There are two varieties of mustard, the white and black. By the action of myrosin, an albuminous ferment, upon sinigrin (a principle peculiar to black mustard) in the presence of water, a very pungent volatile oil is formed. It does not preexist in the seeds. The white seeds yield no volatile oil, but by the action of the same ferment upon sinalbin, an acrid fixed principle is produced having somewhat similar properties. The activity of the ferment is checked by heat and acids, and somewhat by alcohol, so that cold, or at most tepid, water is the proper menstruum for both varieties. The poultice of mustard has its counterirritant or blistering effect sometimes checked by the addition of the white of an egg. The better plan is to watch the skin until the desired redness is secured. However, the white of an egg acts as a check in case the poultice is forgotten and left on too long.

"Heat in its various forms has given me the best results in rheumatism. I have cured many cases of rheumatism with nothing else than hot air from a Betz hot-air apparatus. I have never found a case that was not benefited from hot applications, no matter in what form the heat was applied. In the articular form of rheumatism where the pain was limited to one or two joints I have found an application of the following mixture of benefit: Carbolic acid (cryst.), oz. 1; camphor, ozs. 2; alcohol, oz. 1; chloral hydrate, ozs. 4; glycerin, oz. 1. M. Sig: Apply to affected part. This acts as a counterirritant and is a pain reliever in neuralgia, rheumatism and such troubles, and will relieve an aching tooth promptly if the cavity in the tooth is first cleaned out; apply this on a piece of cotton and also to the inflamed gums on the outside."

Dr. G. E. Stevenson, Gorham, N. Y., in his experience finds the best local application in the three diseases mentioned to be

"carbolyzed magnesium water," made by dissolving two tablespoonfuls of epsom salt and one teaspoonful of carbolic acid in one part of hot water. The parts should be bathed for about ten minutes with the solution, and then a cloth soaked with it should be kept on continuously, covered with a hot-water-bag if desirable. This application opens the sweat-glands, dilates the blood-vessels, stimulates the absorbents and is an excellent anodyne. We have recommended this combination often through the columns of CLINICAL MEDICINE, and it indeed does give excellent results.

Many recommend mustard, in one form or other—several the ordinary mustard leaf made by manufacturers. Mustard is popular in acute affections; iodine for chronic troubles. For neuralgia and rheumatism a combination of menthol and camphor in a hydrocarbon oil is suggested—exact formula not given; the strength doubtless can vary from 50 percent of the active ingredients downward in strength. For neuralgia one student suggests equal parts of chloroform and fluid extract aconite, mixed in the palm and held over the painful area. Doubtless effective, but to be used cautiously. In facial neuralgia another suggests cocaine ointment, strength not given. A 4-percent cocaine ointment is official in the British Pharmacopoeia.

A clever suggestion by another is to soak blotting paper in tincture of capsicum. This can be dried and carried ready for use; it is applied after wetting and is an active counterirritant.

Neuralgia of the sciatic nerve, says still another, is usually relieved by a number of small cantharidal blisters; supraorbital neuralgia by camphochloral, well rubbed in and followed by applications of dry heat.

Here is another, suggested for neuralgia or rheumatism: Salicylic acid, dr. 1; camphor, drs. 2; chloral, drs. 2; oleoresin capsicum, grs. 25; oil mustard, gtt. 15; petrolatum, to make ozs. 2. This makes a nice semisolid "liniment."

Here is a good suggested formula: Chloral hydrate, camphor, aa., drs. 4; tincture aconite, chloroform, aa., drs. 2.

Says Dr. George B. Lake, Wolcottville, Ind.:

"In neuralgia and in acute rheumatism I like best to use an ointment composed of menthol, methyl salicylate and lanolin, well rubbed in and followed by the application of dry heat. In chronic rheumatism I like the dry hot-air treatment, running the temperature in the oven up to 200° to 300° F.

"In acute pleurisy I sometimes use the ointment above mentioned and sometimes one composed of camphor, capsicum and the oils of sassafras, origanum, peppermint and wintergreen in petrolatum, followed by dry heat. In chronic pleurisy I apply dry cups or blisters."

An excellent resumé is by F. F. Attix, Lewistown, Mont.:

"For pericardial effusions and sciatica, emplastr. cantharides, 4 x 6 inches, over pericardial area, and dollar-size on tender spots.

"Over neuralgias, mild trifacial, local applications containing capsicum.

"To the chests of infants, pure oil of amber; to chests of adults, oil of turpentine and lard as strong as skin will permit.

"To recent sprains, cold applications of lead water and laudanum or oil gaultheria, alcohol, ether and soap liniment combined.

"For bites and small foul ulcers, apply pure phenol and neutralize with alcohol.

"Solutions silver nitrate from 1 to 50 percent for direct application, as indicated, to pharynx, tonsils, vagina.

"For goiter, tincture of iodine with or without cataphoresis.

"For rodent ulcers, a red soldering iron thoroughly applied.

"For sluggish eczemas, the x-rays as indicated.

"(a) Neuralgia, paint with tinct. aconite; (b) rheumatism, olei gaultheriæ, Cc. 4.0; etherio, alcoholis, aa. Cc. 15.0; lin. saponis, Cc. 120.0. M. ft. linimentum. Apply. Or ol. gaultheriæ, Cc. 3.0; ung. potassii iodidi, Gm. 30.0. M. ft. ungent. Apply with massage. (c) Pleurisy, antiphlogistine."

**Pastes and Plasters.**—Lassar's and Unna's pastes are not official, that is, they are not to be found in the United States Pharmacopeia, in spite of some statements

to this effect by a number of our students. Differentiate carefully between the "dispensatories" and the pharmacopeias."

There are several Lassar's pastes, including a "naphthol paste," containing 10 percent of betanaphthol and 50 percent sulphur; a "resorcin paste," containing 10 percent of resorcin and 25 percent each of zinc oxide and starch; and a zinc paste, which is the one most commonly associated with his name. This contains 25 percent each of zinc oxide and starch and 50 percent of petrolatum; 2 percent of salicylic acid is usually added. It will be noted that this is half powder and half hydrocarbon fat, so the formula is easily remembered.

There are two Unna's pastes in the N. F. The ichthyol paste contains 25 percent of ichthyol; the soft zinc paste 10 percent each of zinc oxide and calcium carbonate. Here is another: Gelatin, 14 parts; water, 10 parts; glycerin, 10 parts; zinc oxide, 4 parts.

### EXPERIMENTS WITH DROPS

Since the subject of drop-size was brought up in the Post-Graduate Course in Therapeutics my interest in the subject has revived, and I subjoin the results of a series of tests made by me some time ago, together with those of further tests made under the same conditions within the last week. I also at this time verified the results of the former tests.

Surface No. 1 was a glass tube drawn out to a point, so that the drops might form on as small a surface as possible.

Surface No. 2 was a glass sphere about one inch in diameter and Surface No. 3 was also a glass sphere, but was about three inches in diameter.

TABLE SHOWING VARIATION IN SIZE OF DROPS

	Sur- face	No. of Drops per min.	Volume of 100 Drops	Drop size in Cc.	Drop size in minims
Liquid dropped					
Water	No. 1	60	5.00 Cc.	0.050 Cc.	0.77
"	No. 1	240	6.50 Cc.	0.065 Cc.	1.00
Water	No. 2	30	17.77 Cc.	0.177 Cc.	2.73
"	No. 2	120	21.20 Cc.	0.212 Cc.	3.27
"	No. 3	120	23.78 Cc.	0.237 Cc.	3.65
Glycerin	No. 2	30	11.46 Cc.	0.114 Cc.	1.75
"	No. 3	30	12.10 Cc.	0.121 Cc.	1.86
Alcohol	No. 1	30	2.00 Cc.	0.020 Cc.	0.30
"	No. 2	30	6.00 Cc.	0.060 Cc.	0.92

These results demonstrate the following points: (1) The larger the surface on which

a drop forms the larger will be the drop (this is because of the increase in surface tension). (2) The faster the rate at which the drops form the larger will be the drops. (This is due to the fact that when the drops form more rapidly more liquid enters the drop before the pull of gravity has time to separate it from the surface.) (3) The greater the cohesion of the liquid, other things being equal, the larger will be the drop. (This is because it will longer resist the pull of gravity which tends to separate the drop.) (4) The greater the specific gravity of a liquid, other things being equal, the smaller will be the drop. (This is because the liquid being heavier the drops will tend to break off sooner.)

The glycerin has a specific gravity of 1.25, but has more cohesion than the water, while the alcohol has a specific gravity of 0.82 but has less cohesion than the water.

Other things being equal, tinctures and alcoholic solutions will form smaller drops than will watery solutions, while syrups and viscid preparations will form the largest drops of all.

GEO. B. LAKE.

Wolcottville, Ind.

#### A REJOINDER ON A PRESCRIPTION INCOMPATIBILITY

I do not like the boisterous way in which you closed the editorial comment on my curtailed and interpolated article in *CLINICAL MEDICINE* (February, 1908, p. 286). You have quoted Caspari at length to support a supposed incompatibility between potassium bromide and strychnine sulphate, and between potassium bromide and codeine sulphate, in terms positive enough to satisfy the most exacting inquirer forever, and yet you were so gullible as to give a vast amount of space to "authority" which you supposed was right, yet in reality you were unable to say whether that authority was right or wrong. Why didn't you let it sink into your soul, "Is Caspari right or is he wrong?" It is a good thing for science that scientific men are never satisfied with accepted dogmas.

I do not wish to enter into any criticism of Dr. Caspari's work, because he is now

well advanced in years and is no longer engaged in active scientific work, and no doubt wishes to be left alone. Therefore, with due homage to him, I shall pass what he has said in commentation and present merely the formulas alone:

1. Strychninæ sulphatis .....gr. 1  
Potassii bromidi .....oz. 1  
Aquæ destillatæ, q. s. ad...oz. 4

In this instance, if chemically pure salts be used, the compounding of this prescription will present none of the difficulties spoken of by Dr. Caspari, and the result will be a permanently clear solution. I have prepared this mixture with ease, using ordinary tap water instead of distilled water, and there is no "deposit of colorless crystals" to be seen. And I can demonstrate the presence of the alkaloidal salt in solution at any moment by adding a small amount to Donovan's solution, when a white precipitate is readily formed.

2. Codeinæ sulphatis.....grs. 8  
Potassii bromidi.....oz. 1  
Aquæ destillatæ...q. s. ut. ft. ozs. 4

In this instance, we have also a permanently clear solution, without any of the annoyances spoken of by Caspari, when chemically pure drugs are used to make a solution in the same quantity of ordinary tap water. If there is any chemical incompatibility between these salts it is their solitary duty to constantly present it. I am inclined to think, however, that Dr. Caspari has been led into this error through using compressed tablets or pills of the alkaloidal salts to make the solutions. In that event he would invariably have a white amorphous substance in the solution, which is the organic starchy excipient of the pill or tablet, and which is both unsightly and harmless. It is next to an impossibility to suspend it uniformly by agitation; but it is easily removed by filtration without affecting the potency of the solution one iota. I presume that you have enough of this, since you entertain dogmatically fixed views upon "authority" which are not likely to be swayed by any humble statements from me.

"Truth crushed to earth will rise again,  
The eternal years of God are hers:  
But error, wounded, writhes with pain,  
And dies amid its worshippers."

L. B. EVANS.

Baltimore, Md.

[Hooray! Hooray!! We like to see a man get his dander up—and as for saying cuss words about "authority," why—we have a fellow feeling for Dr. Evans.

Beside Caspari, we had a hatful of other quotations from (we hesitate to say it) "authorities," bearing out the same point. See for instance, Ruddiman's "Incompatibilities" and Scoville's "The Art of Compounding."

The point to be emphasized is this, that while there may be, and for that matter are, exceptions to the rules concerning the incompatibility of the alkaloids with alkalis, iodine, bromine, etc., it is a dangerous thing to take chances. Unless you are sure that your prescription is one of these exceptions don't mix 'em, but stick to the single remedy. We are greatly obliged for Dr. Evans' comment. Though peppery, it's excellent.—Ed.]

### METRIC PRESCRIPTION-WRITING

Under the heading of "Prescribing," on page 125 in your January journal, there appears a good scheme for estimating amounts in the apothecaries' measure in writing prescriptions.

I am going to submit to you as simple a rule in estimating amounts in prescriptions written in the metric system.

The basis of my prescription is 60 Cc., or 2 ounces, and in writing for 4-, 6-, 8- and 12-ounce mixtures the amounts should be multiplied accordingly. In writing a prescription for a 60-Cc. mixture, of which one dram is to be the dose, ascertain first how many grains of each ingredient you want to give at a single dose and put down as many Grams or cubic centimeters.

Example: We will take a 60-Cc., or 2-ounce, mixture in which we desire to give one dram at a dose each to contain 10 grains of chloral and 12 grains of potassium bromide, the vehicle to be syrup of orange

and water. The prescription would be written thus:

Chloral hydrate ..... 10.0  
Potassium bromide ..... 12.0  
Syrup of orange ..... 30.0  
Water, q. s. ad..... 60.0

M. Sig.: 4 Cc. at a dose.

This has made the metric system very simple to me by keeping the above in mind, especially in transposing amounts in prescriptions from one system to the other.

W. E. BALDWIN

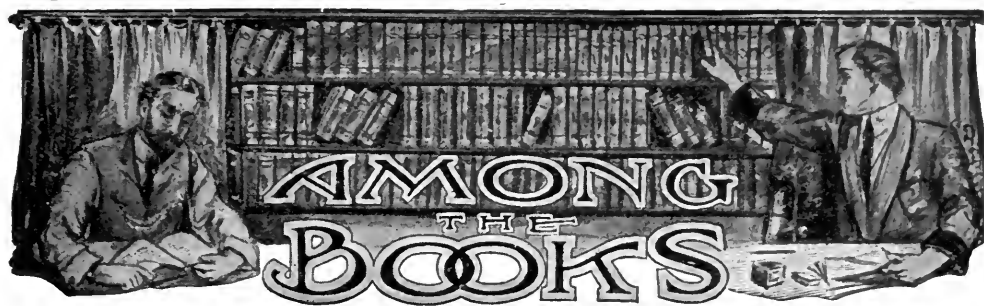
Jamaica, Ill.

### EXAMINATION QUESTIONS

1. Describe the technic of making a hypodermic injection. What are the most favorable sites for the introduction of the remedy?
2. What symptoms may be produced by the introduction of morphine directly into a vein and how should they be treated?
3. What relation has the solubility of a substance to the size of the dose? To its toxicity?
4. How does the balance between the absorption and the elimination of a substance affect the dose?
5. Defend the doctrine of maximal and minimal dosage. Show the weak points of this doctrine, explaining "dose to effect."
6. What is meant by "accumulation?" What conditions favor it? What degree of drug accumulation is desirable?
7. Tell something about "saturation."
8. Explain innervation and enervation from the electrical standpoint.
9. What is "bloodless venesection" and how is it performed?
10. How do hydrotherapeutic applications act in congestion of the lung? in lumbago? Give technic.
11. Define *reactive* and *nonreactive* applications. Give the therapeutic effect of each.
12. What objections are there to nonreactive applications?

### RESEARCH QUESTIONS

1. What, in your experience, are the most frequent accidents and dangers from hypodermic injections?
2. Describe the effects that may follow the injection of air into a vein.
3. Tell something of the tolerance for morphine in different individuals, as observed in your practice.
4. "Normal-salt solution" is spoken of in the text: What is it? what is a decimormal solution? how made?
5. Tell something about cumulative effects—how produced, their dangers, and by what drugs most likely to be produced.
6. Under what conditions may an insoluble substance be medicinally valuable when administered by the mouth?
7. Give several methods of administering mercury—by mouth, hypodermically and inunction.
8. Vaginal douches—are they reactive or non-reactive? How best given, and effects obtained?



### KIRKES'S "PHYSIOLOGY"

Kirkes's Handbook of Physiology. Revised and Rewritten. By Charles Wilson Greene, A. M., Ph. D., of the University of Missouri. Sixth American revision. 507 illustrations, many in colors. New York: William Wood & Company. 1907. Price \$3.00.

This book is in this edition a really new "Kirkes's Physiology", and it is as up to date as is necessary for the student. An exhaustive physiology, if it were possible to be written now, would occupy a library of volumes, but would be useless to the student. The happy ability needed in writing a physiology for a student at the present is not only to remember all the discoveries and theories in vogue in the various branches of the science, but to know what to forget. This only a teacher can obtain. And Prof. Greene, we think, has proven his eminent ability and usefulness for the student in this book. A word too is due in praise of the mechanical make-up of the book and the surprising moderate price of it.

### DANFORTH'S "LIFE OF N. S. DAVIS"

The Life of Nathan Smith Davis, A. M., M. D., LL. D. By I. N. Danforth, A. M., M. D., Chicago. Illustrated. Cleveland Press. 1907. Price \$2.00.

Human inertia, a scientific euphemism for vulgar stupidity, cannot be overcome, especially in its social phases, by mere logical reasoning. And this is the sufficient excuse for all the exaggerations of the honest reformers who have benefited humanity.

The inert pendulum at equilibrium obeys the theoretical law of gravitation. And if you lift it to one side, to but just the amplitude to which the *vis a tergo* may allow, it will likely swing to less than that amplitude to the other side and after a few excursions come to a standstill. You must lift the pendulum to a higher altitude at its start from inertia on the one side if you expect the *vis a tergo* to keep the machine going. Such is humanity and such are its reformers, and one of them was Dr. Davis. The biographies of such men are instructive and edifying and such is the one before us. Dr. Danforth has done his work well, because evidently *con* and *de amore*, although he has written this life so recently after Dr. Davis' death—for distance lends not only enchantment but truthfulness too.

### SOLLMANN'S "PHARMACOLOGY"

A Text-Book of Pharmacology, and Some Allied Sciences, Therapeutics, Materia Medica, Pharmacy, Prescription Writing, Toxicology, etc. Together with Outlines for Laboratory Work, Solubility and Dose Tables, etc. By Torald Sollmann, M. D., of Western Reserve University. Second thoroughly revised and greatly enlarged edition. Philadelphia and London: W. B. Saunders's Company. 1906. Price \$4.00.

The plan of this book is admirably conceived for both didactic and practical purposes. The teacher and student of pharmacology will find here all they need of theoretical knowledge and practical execution. And the physician, also, who has to have his medicaments prepared for him may learn

from this book how these medicaments are made and how best to use them.

We naturally turned to the alkaloids and active principles and found the author's expositions lucid, practical and practically available. The book of 1042 pages and 28 pages of an admirable index is divided into four parts: (1) Preparations and Prescribing of Medicine, and Toxicology; (2) Pharmacology, Therapeutics, and Materia Medica. Drugs with predominant systemic action, and drugs of local action; (3) Laboratory Work in Pharmacology. (This part is excellently conceived and painstakingly carried out.); (4) Appendix of various valuable information needed for practice and general gratification of knowledge.

The intelligent physician who loves his noble work for itself, no less than for the profit and standing it brings him, will perhaps best value this book.

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#### MORRIS'S "HUMAN ANATOMY"

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Human Anatomy: A complete Systematic Treatise by English and American Authors. Edited by Henry Morris, M. A., M. B., London, and J. Playfair McMurrich, A. M., Ph. D., Professor in the University of Michigan. 1025 illustrations, 319 in colors. Fourth edition, revised and enlarged. In five parts. Price, \$7.50, or in one octavo volume, \$6.00. Publishers, P. Blakiston Son & Co., Philadelphia. 1907.

This work seems to be a *non plus ultra* at the present. What will exceed this will be, we think, a combined anatomy and physiology, a description of the functions of the human body, incorporated with each anatomical part described. The five separate parts of the work are: Part I. Introduction, General Morphogeny, by J. P. McMurrich; Osteology, rewritten by P. Thompson, M. D., King's College, London; Articulations, by Henry Morris, London.

Part II. Musculature, revised and largely rewritten, by C. M. Bardeen, A. B., M. D., of the University of Wisconsin; Organs of Circulation, revised and largely rewritten by Florence N. Sabin, B. S., M. D., of Johns Hopkins University.

Part III. Rewritten by Irving Hardesty, A. B., of the University of California.

Part IV. Organs of Digestion, revised by G. Carl Huber, M. D., University of Michigan; Respiratory Organs, rewritten by J. Terry, A. B., M. D., Washington University, St. Louis; Urinary and Reproductive Organs, revised by J. P. McMurrich, University of Michigan; The Structure of the Pelvic Organs, by Peter Thompson, M. D. King's College, London; Ductless Glands, by G. Carl Huber, University of Michigan; Skin and Mammary Glands, rewritten by A. T. Kerr, B. S., M. D., Cornell University.

Part V. Surgical and Topographical Anatomy, by W. H. A. Jacobson, M. Ch. Oxon., Guy's Hospital.

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#### PYLE'S "PERSONAL HYGIENE"

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Personal Hygiene: A Manual of Proper Living upon a Physiologic Basis. By American authors. Edited by Dr. W. L. Pyle. Third edition, revised and enlarged. Philadelphia and London: W. B. Saunders Company. 1907. Price \$1.50.

In our review of the second edition of this book, in 1905, we said, among other things, that the book contains many points of an everyday nature in hygiene which are not taken up in the usual medical curriculum, and yet of which the general practitioner has to be informed if he does not wish to be slow in his answers to a questioning client. The same approving words we repeat and with increased emphasis of this revised and enlarged edition. A most useful book for an educated layman or woman.

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#### MAY'S "DISEASES OF THE EYE"

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Manual of the Diseases of the Eye, for Students and General Practitioners. By Charles H. May, M. D., College of Physicians and Surgeons, Medical Department of Columbia University, New York. Fifth edition, revised. 362 original illustrations, 22 plates, 62 figures. New York: Wm. Wood & Co. 1907. Price \$2.00.

This compact volume of 391 pages has proved a successful attempt to say just

enough to meet the needs of those for whom it is written, so as not to burden the learner nor to take up too much of the time of the busy practitioner. These merits have been recognized by German, French, Italian and Spanish physicians into whose languages it has been translated. It has also been reprinted in Great Britain since its first appearance in 1905. The book is not meant to make the larger ophthalmic works useless, but it will keep its own place for its clearness and succinctness of statement concerning the diseases that are met with every day.

#### STEWART'S "MANUAL OF SURGERY"

A Manual of Surgery, for Students and Physicians. By Francis T. Stewart, M. D., of the Philadelphia Polyclinic. 504 illustrations. Published by P. Blakiston's Son & Co. Philadelphia. 1907. Price \$3.50.

The book contains 778 pages inclusive of a full index. Excellent paper and print, flexible leather covers, round corners, gilt edges—altogether a very attractive exterior to correspond with the internal matter, which is safe and reliable to follow in practice, as well as acceptable in theory.

#### EDWARDS'S "PRACTICE OF MEDICINE"

Principles and Practice of Medicine. By Arthur R. Edwards, A. M., M. D., of the Northwestern University Medical School, Chicago. Illustrated with 101 engravings and 19 plates. Lea Bros. Company, Philadelphia and New York. 1907. Price \$5.50.

The book contains 1277 octavo pages and an extensive index of 51 pages. Its eleven sections treat of the following subjects: (1) Specific Infections; (2) Diseases of the Circulation; (3) Diseases of the Respiratory Organs; (4) Diseases of the Digestive Tract; (5) Diseases of the Kidney; (6) Diseases of the Blood; (7) Diseases of the Ductless Glands; (8) Constitutional Diseases; (9) Diseases of the Nervous System; (10) Intoxications, Sunstroke; (11) Diseases Due to Animal Parasites.

The book is written for the practising physician whose aim is, and always should be,

to cure or alleviate disease. The author strives in treating each disease to give the pathologic etiology of it and the proper therapeutics to meet it. It is in every way a modern treatise built on the scientific observation of disease.

#### HARTRIDGE'S "REFRACTION"

The Refraction of the Eye: A Manual for Students. By Gustavus Hartridge, F. R. C. S. 109 illustrations. Fourteenth Edition. Printed in Great Britain and published in Philadelphia by P. Blakiston's Son & Co. 1907. Price \$1.50.

An excellent little book of 258 cleanly printed pages, with an appendix of the metric system as applied to ophthalmic measurements for visual capacity required in various military and civil services in Great Britain, and test types in letters and musical notation. The beginner can have no better teaching text to impress his mind with the elementary truths of optics and ophthalmics.

#### COOK COUNTY HOSPITAL REPORTS

We gratefully acknowledge the receipt of the Cook County Hospital Reports, covering the period from December 1, 1904, to December 2, 1906. There is an amount of work done in that establishment the good of which experience should not be lost, at least to Illinois physicians and surgeons.

#### BRINKERHOFF'S "DISEASES OF THE RECTUM"

Diseases of the Rectum. Their Consequences and Non-Surgical Treatment. By W. C. Brinkerhoff, M. D. Price \$2.00. Orban Publishing Co., Chicago,

This book is written extra-cathedraly and not ex-cathedraly. Its object is to vindicate the treatment of piles by the injection method—using what and how, the author does not say. Dr. Chas. W. Olson gives the composition in his "Secret Nostrums" as carbolic acid, one ounce, olive oil, five ounces, and zinc chloride, eight grains. Inject into the largest piles eight drops,

into the medium-sized piles from four to six drops, and into the small piles from two to three drops.

The first part of the book relates cases and describes the results of their treatment by injection, and on that account it is of special value. The other parts of the book relate to the controversy about the merits or demerits of the treatment of piles by injection, and to the diagnosis and treatment of other rectal diseases. The author and his father have made a good deal of wealth by this their specialty. The impression the book leaves upon us is that of the statements of the experiences of an honest, free and closely observing physician, to whom we cannot but wish success.

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#### JACKSON'S "DISEASES OF THE EYE"

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Diseases of the Eye: A Manual of Their Diagnosis and Treatment. By Edward Jackson, A. M., M. D., of the University of Colorado. Second thoroughly revised edition. 182 illustrations and two colored plates. Philadelphia and London: W. B. Saunders Company, publishers. 1907. Price \$2.50.

The book is written especially for the general practitioner, omitting therefore extra refinement in details and matters merely in question yet, but not established in practice. But everything new of real value in ophthalmology that has come into prominence since the first edition, whether new procedures or modifications of old practices or medications, the physician and student will find faithfully and lucidly presented in this edition.

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#### HECKER AND TRUMPP'S "DISEASES OF CHILDREN"

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Atlas and Epitome of Diseases of Children. By Dr. R. Hecker and Dr. J. Trumpp, of the University of Munich. Authorized translation from the German, edited by Isaac A. Abt, M. D., of the Rush Medical College, University of Chicago. Forty-eight colored plates and 147 black and white illustrations. Philadelphia and London: W.

B. Saunders Company, publishers. 1907. Price \$5.00.

Of all Saunders's Medical Hand-Atlases there is none to excel and hardly one to equal this volume in accuracy and vividness of illustration. It is the most useful auxiliary to even the best of our pediatric textbooks, while this volume itself is a very comprehensive epitome of this department of medical practice. The American translation of this book is excellent and the numerous additions by the editor are an advantage to the work.

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#### MICHIGAN STATE BOARD OF HEALTH

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We acknowledge thankfully the receipt of the thirty-third annual report of the Secretary of the State Board of Health of the State of Michigan, for the fiscal year ending June 30, 1905.

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#### DORLAND'S "POCKET DICTIONARY"

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American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A. M., M. D., of the University of Pennsylvania.

This book is pleasing in style of binding and color. It is an offspring of the author's very handy larger medical dictionary, and contains all a physician, his secretary and typewriter may need for quick and ready reference. The fact that this edition is the fifth since 1898, sufficiently shows its well merited popularity. Publishers: W. B. Saunders Company, Philadelphia and London. 1907. Price \$1.00 net.

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#### LOVETT'S "CURVATURE OF THE SPINE"

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Lateral Curvature of the Spine and Round Shoulders. By Robert W. Lovett, M. D., of the Boston Children's Hospital, Philadelphia. Published by P. Blakiston's Son & Co. 1907. Price \$1.75.

A valuable book, summing up the progress made the last decade in this hitherto unpromising field of orthopedics. The illustrations, 154 in number, are very instructive and the text succinct and lucid.





#### PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## ANSWERS TO QUERIES

ANSWER TO QUERY 5254.—In answer to Query 5254 concerning "Incontinence of Urine" I would suggest that Dr. E. W. S. try tinct. gelsemium or gelsemin in usual dosage. I think he will get results that will be highly satisfactory to both himself and patient.

L. M. LOWE.

Glyndon, Minn.

ANSWER TO QUERY 5324.—"Treatment of Rhus Poisoning." Doctor, didn't you know that the application of a solution of quinine sulphate, 6 to 8 drams to water, 6 ounces, will cure any case of rhus poisoning? I certainly think it will. I have treated many cases in this way and have never seen

any but speedy cures, and by that I mean in from a few hours to two days. This amount of quinine does not dissolve in the water, but make the mixture just the same, shake it well, and apply in from every few minutes to every few hours, according to the severity of the case. The quinine can also be applied with equally good results by making it into a paste with flour, but I prefer the solution because more simple and easy. No other treatment whatever is needed to cure the trouble. Of course, if the patient is suffering from the effect of chronic constipation, etc., that may need treatment.

WM. YEATES.

Bonfield, Ill.

## QUERIES

QUERY 5269.—"Late Change of Presentation." S. C. C., New York, in a recent communication, says: "I desire to compliment you on the outlook of CLINICAL MEDICINE for 1908. It was my idea that it couldn't be improved on but I am glad to know that you have found a way. I trust you received my renewal for two years. I wish I could have made it for ten years. I desire to report a peculiar incident in a case of obstetrics; at least peculiar to me. I was summoned by telephone, just as I was about to sit down to my Thanksgiving dinner, to a case of labor—woman of 29, primipara—the pregnancy being one of seven months. Examination showed everything apparently all

normal as regards presentation, position, etc. There was but very little amniotic fluid and the bag of waters not broken. Labor-pains were of medium intensity. With the emptying of the amniotic sack, which was artificial, the pains increased and the head began to descend noticeably. Things continued like this until about eleven p. m., when her pains ceased entirely. Fearing lest her strength and pains would give out I advised the use of forceps, but was denied. I endeavored to bring on the pains again but without success, and at one a. m. left for home, telling them to call me when labor set in again. I did not hear from them again that night and reached the house about ten o'clock next

morning. The pains set in again a little while before my arrival. They were now quite strong and frequent. I sterilized my hands and proceeded to make an examination to see how things were progressing. Imagine my surprise to find where I had left the night before a vertex presentation, now a foot with the member almost out of the vulva. The labor now proceeded as any breech-case, though it was a severe one. Now, what changed the position of the child after labor had commenced? I have been wondering if any others of THE CLINIC 'family' have met with anything similar. I might add that during her first pregnancy she had a tooth extracted and while in the dentist's chair was taken with a 'convulsion,' epileptic in character. She says, as do also her people, that this was the first time she had ever experienced anything of the like. In two subsequent pregnancies she had these same seizures and it was to this that I attributed her premature labor. These last usually about three weeks after labor."

First, we desire to thank you for your kindly expressions. CLINICAL MEDICINE will be better, we believe, in 1908 than it ever has been, and we want every member of the "family" to help us by contributing helpful suggestions.

The case you report is of interest. A similar change of position has been reported before. You see, Doctor, this was a premature expulsion of fetus and (with perhaps some postural assistance) the head ascended and the foot came down, then expulsive pains commencing, a foot presentation was inevitable. It is unfortunate that in these cases one cannot have an inkling of the future so as to outline the fetus in utero. Were we thoroughly familiar with the conditions from first to last we would probably be able to explain easily the transposition. We give the case to the "family" and ask for further reports

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QUERY 5270.—"Cracked Finger Tips."

S. W. H., Manitoba, asks: "What is the best treatment for the cracked condition of the fingers which occurs just at the ter-

minal angle of the nails and is so common in winter-time? In the case of patients with dry skins when once started these sometimes persist all winter. If you can prescribe a successful treatment I shall consider it alone worth several years' subscription to CLINICAL MEDICINE."

Cracked fingers is something we rarely see in this part of the world. Many years ago in Canada, on the shores of the Georgian Bay, the writer remembers seeing these cracks which were very deep and painful. Applications of compound tincture of benzoin and dipping the whole fingertip in aristol collodion at night (the smart is severe for a second) promptly heals up the creases. In some instances where the infection was marked the cracks were first thoroughly cleansed with hydrogen dioxide, painted with pure oil of turpentine and then dipped in the collodion. We should not at all be surprised to find carbenzol a positive remedy. These people invariably require the triple arsenates with nuclein, and epsom-salt sponge-baths (one ounce to three pints) taken at body-temperature two or three times a week.

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QUERY 5271.—"Cause and Effect." L. S. L., Missouri, about two years ago wrote us regarding the tapeworm formula which he had used; the patient went into a profound stupor, with cyanosis, and for two hours following the exhibition of the dose was in a precarious condition. The party came to the office one morning to be treated for tapeworm, and that was all he came for. The doctor tried to get a diagnosis but could get very little out of the German. He now writes: "The person in question has since died. The vague symptoms continued and he was finally taken to the hospital for exploratory operation. From under the diaphragm welled out a chylous matter (probably pancreatic cyst) which was very voluminous and offensive. He died about a week after this, but no postmortem examination was made. —Your January journal is a hummer."

This experience serves to show the absolute necessity for "close diagnosis"—

the examination of a patient and understanding of underlying pathological conditions before exhibition of active remedies. Doubtless the stupor which followed the exhibition of the tapeworm remedy was due chiefly to this lesion and the organic derangements consequent thereon. It is a pity that a postmortem was not made and positive diagnosis arrived at.

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QUERY 5272.—“A New Idea Regarding the Sulphocarbolates.” E. L. F., N. J., has a professional friend who evidently has not kept *au courant* with modern therapeutic methods. “In speaking of the intestinal antiseptic which,” E. L. F. says, “I have used for years—one of my doctor friends objected, saying that the sulphocarbolates ‘destroyed the intestines.’ No matter what my opinion might be—would be glad to hear from you.”

Doctor, your friend's statement is almost too ridiculous to need serious answering. If the sulphocarbolates “destroyed the intestines” the present generation would have been pretty nearly decimated. The sulphocarbolates are being used more extensively every day and if you are *au fait* with current literature you must have noted that many of the later writers of text books on “Treatment” accept the sulphocarbolates as the most effective and satisfactory intestinal antiseptics. There are some cases in which the zinc salt given in large quantities would be irritative and the commercial salts are always to be avoided. It is more than likely that your friend has exhibited zinc sulphocarbolate as procured upon the open market and we have seen tablets of this impure drug which were positively injurious. Zinc sulphocarbolate as it exists in the “intestinal antiseptic” tablet is absolutely non-injurious, and extremely efficient. As you know, the single salts, sodium, zinc and calcium sulphocarbolates, are obtainable and any combination of these which seems desirable to the practitioner may be made at the bedside. In some cases it is best to give sodium sulphocarbolate; in others sodium and calcium; in other cases again the zinc salt alone, but as a rule the proportions ex-

isting in the “intestinal antiseptics” prove ideal. Get your friend to test their action and he will have reason to thank you—so will his patients.

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QUERY 5273.—“How to Use Anodyne for Infants.” C. W. P., Indiana, makes an inquiry about Waugh's anodyne. He says: “I have used the formula and have noted good results. Is there an anodyne made in solution stronger than the above and can it be used in a child four months old? I give fifteen drops of the solution every half hour for four or five doses. I have a case that has been ‘a staller’ to all and could use something like this.”

The anodyne for infants (Waugh) can be given in any dosage and to suit all cases. There is no need for a fluid preparation, as the anodyne granule can be promptly dissolved in a little hot sweetened water or you may make a “stock solution” of the desired number of granules and add a little aromatic or simple elixir. Govern dosage by codeine content. Let us call your attention to the calmative for children (Candler) formula. This contains no opiate and is one of the most effective and desirable formulas for the pediatricist. You do not describe the case you have under treatment; we are therefore unable to make suggestions. You can certainly make a solution of either the anodyne or the calmative and give ten, fifteen or twenty drops half-hourly or hourly to effect. Bear in mind that children are tolerant of hyoscyamine and also remember that the calmative formula causes flushing of the face. It is the remedy of choice in congestive conditions or gastric disorders, and wherever there is constipation or insufficient secretion it should be given in preference to the anodyne. If you care to describe the case which you say has proven so hard to manage we shall be pleased to aid you.

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QUERY 5274.—“The Cure of Cancer by Medicinal Measures.”—A. D. F., Conn., wrote us a few weeks since regarding a combination tablet for cancer with which we are experimenting. He says: “Allow me now

to suggest the following formula which from my experience I believe would be valuable: Condurangin, 1-67 gr.; ammonium chloride, 1 gr.; arsenic iodide, 1-67 gr.; phytolaccin, 1-3 gr.; calx iodata, 1-3 gr.; nuclein, 4 drops. (Chelidonin may be added if thought desirable.) In connection with the above I should give thyroid extract in some cases. I had, three years ago, a case of a large carcinoma in the rectovaginal septum. The patient went to a hospital for operation, which was pronounced impossible by the surgeon who, however, confirmed the diagnosis of carcinoma previously made by the family physician. The case, a few weeks later, came under my care. The mass was hard, nodular, as large as my closed fist, sharp stinging pains in the mass, cancerous complexion. Thyroid extract and nuclein tablets were given and pushed to effect. The growth was slowly resolved (?), entirely disappeared and the patient is still in vigorous health.

"I now have a case of carcinoma of the uterus which is improving nicely under the same treatment. Hemorrhage has stopped. Patient is almost free from pain, eats, sleeps and looks better. (The growth had not broken down.) A few other cases have showed thyroid extract to be of value in cancer. Investigate it. We know it will resolve fibroids—certainly."

We are still experimenting with the "chelidonin and condurangin compound" tablet and later on will report results. Your formula strikes us as a good one, though we do not like the idea of ammonium chloride with arsenic iodide, and the nuclein would, probably, be entirely destroyed in their presence. It would be much better to give it separately. So many "cancers" cured by internal medication prove not to be cancers, as a matter of fact, and it is, as you know, unfortunately true that ache and every one of the so-called "cancer cures" proves useless when thoroughly tested by experienced, capable practitioners upon really malignant cases. The profession is eagerly looking and earnestly working for a "cure" for cancer, but, Doctor, there are cancers and cancers so that after all it is impossible for any

one remedy or combination of drugs to cure *all* malignant growths. By proper local and internal treatment we can cure epithelioma and in some favorable cases cause the disappearance of deeper-seated malignant growths but carcinoma must today be regarded as demanding early surgical treatment.

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QUERY 5275.—"Trauma of Labia Majora." H. B. P., Wisconsin, asks us: "What shall I do with a girl, 16 years old, who fell down upon the back of a rocking chair about two weeks ago, thus injuring herself; the labia majora are swollen badly; are hard to the touch, and she can not get her legs together. The parts pain her when she is on her feet, but when quiet do not seem to hurt her so much. I applied cold compresses of lead water, opium, witch-hazel, and so forth, but the swelling is about the same now as when she was hurt. Now I am using hot applications changed often. I have also used a mild iodine ointment but it doesn't seem to help the case any."

We regret extremely that you did not make a thorough local examination and report the exact conditions present. You do not state whether there is undue heat of the parts or signs of pus formation. You may have an abscess of the *labia majora*; on the other hand you may have a rupture. Do not forget this. In the latter case all the applications you can think of will be useless. We are a little inclined to think that this is what has happened. A simple contusion would certainly have yielded ere this. Are both sides affected or only one? Is there any break of the skin. Can you detect fluctuation? You had better examine the vulvovaginal glands, pressing upon the glands and along the course of the duct. See if there is any discharge. Simple edema of the vulva usually subsides in a week or ten days, even where the contusion is severe. Where direct violence has been done, as by falling astride of an object, the soft tissues may be incised by pressure against the narrow edge of the rami of the pubis or ischium. In very rare cases subcutaneous hemorrhage causes swelling and we have pain and discoloration. The latter may not occur for

several days. Here, of course, we have a hematoma which should promptly be incised and emptied. In severe contusions, hot solutions of lead water and laudnum alternated with compresses wrung out of tincture of arnica prove most useful; or ichthyol or carbenzol may be applied and the parts covered with a compress wrung out of a hot solution of epsom salt. If suppuration occurs, incise and evacuate the pus, irrigate with peroxide of hydrogen, pack with carbenzol or iodoform gauze; but as we have already pointed out you must exclude possible hernia. Occasionally a cyst of the vulvovaginal glands follows trauma and in a great many cases the formation of an abscess has followed injury, such as a kick or fall. All the symptoms here are aggravated by standing or walking; inability to close the legs; the woman is comfortable only in the recumbent position with extremities separated. Carefully note temperature. If there is any sign of abscess-formation push calcium sulphide in small doses, with the deferrescent formula internally, and apply carbenzol and epsom-salt compresses locally; incisions as soon as fluctuation can be detected. If we had a clearer conception of conditions we might be able to help you more positively. Be sure to keep the bowels open with saline.

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QUERY 5276.—“Infantile Malnutrition.” “Speck in the Eye.” A. F. W., of New York, describes the following: “Baby, three months old, on Sept. 15 and up to that time had been under care of a neighboring physician. Was called on the above date and found the following condition: Weight at birth was three and a half pounds. Present weight, three and three-fourths pounds. Bowels constipated, with curdled milk and stringy mucus in stool. Considerable vomiting and almost constant crying. There was a look about him that made one think of an India-famine baby. The mother had nursed him for a while and as he did not gain any, changed to a baby food, and up to the time I was called she had tried many different foods, including modified cow’s milk, with and without peptonizing.

“I ordered a teaspoonful of castor oil, to clean out the bowels, and left a few calmative tablets, to be used as required, telling them to send to the office that evening for some medicine that I did not carry with me. What that ‘medicine’ would be I had not then decided. I returned home to read and think.

“As they had tried all the usual methods of feeding, I determined to try something new. Now, my wife is always on the lookout for pointers and last summer, when away on a visit, she heard of a similar case that was apparently saved by an ‘old woman’s’ remedy after the usual line of treatment had failed. The remedy was the lining of chicken-gizzards, dried and powdered. As the usual line of treatment did not hold out any hope of improvement and as something had to be done right away, I determined to try this form of treatment and gave the following:

“Barley water, made by boiling pearl-barley in a double boiler for three hours was mixed with modified milk with 5 grains of powdered lining of chicken-gizzard, steeped in two ounces of water at 200°F. for five hours, and this was added to one quart of the prepared food. This was apparently enough to start the digestive process, as the boy now weighs six and one-half pounds and has improved greatly in general appearance.

“This is a very homely remedy but has evidently been successful in the case reported and in this one of my own experience. What do the editor and readers of THE CLINIC think of this?

“I wish to ask about a small spot in my left eye. It is a small opacity (or floating speck) that changes its position with the movements of the eye. Sometimes it will disappear altogether for a while, but will return again. Is there anything I can take for myself or should I consult a ‘specialist’? Any advice in regard to this will be gratefully received.”

That baby whose case you report in this letter evidently has suffered from malnutrition, owing to inability to digest its food. The chicken gizzard which you gave simply served as a digestive, acting about the same

as pepsin or papayotin and other remedies of this class do. Perhaps it may not be known to you that this "old woman's remedy" (and, by the way, it is a good one, and no question about it) has been utilized for many years. Warner's preparation, known as ingluvin, is, I believe, derived from this source. We shall be glad to print your letter and open the matter up for the criticism of the family.

Regarding the spot in your eye I believe, Doctor, that the best thing you can do is to consult a specialist. To begin with, we do not claim to be "wise" concerning the special ailments of this part of the anatomy, and in the second place, you do not give us information enough to help greatly. For instance, you do not even tell us whether the "speck" is objective, that is, can be seen by an outsider, or is merely subjective, that is, appreciable only by yourself. We presume however that the latter is the case, and under such circumstances these spots very frequently have no very great significance aside from possibly a deranged liver. At any rate, the best thing to do is to go to an oculist and have him go over your eyes carefully.

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 QUERY 5277.—"Peculiar Symptoms Accompanying Exhibition of Glonoin." E. L. L, Texas, has had a peculiar experience which he describes as follows: "Please find enclosed sample of granules which came out of a bottle labeled 'Glonoin, gr. 1-250.'" A few nights ago one of my patients took one of these granules, and in a few minutes the circulation was so fast she could not count it. Respiration about 45 per minute, abdominal muscles contracted until she was drawn almost double, hands and feet swollen badly, no 'musical ringing' in head, no pain about the body. Patient had 'smothering spells' (asthma?) and was directed by me to take one of those granules when spells began to come on. These spells are caused from 'stomach trouble;' heart seems to be all right at this time. She did not take any other medicine but the glonoin granule. What caused the trouble? That-sized dose of glonoin should not cause it; what did it? When I got to the patient

about an hour and half after the granule was taken, she was feeling very well, but hands and feet were swollen badly. She is a lady 60 years old. I have used the granules a short time and have been well pleased; got good results, until this time. I am sure it was the glonoin granule that caused the trouble. The same patient has taken granules out of the same bottle with good results."

Some of the symptoms you describe may be caused under certain conditions by a small dose of glonoin, that is to say, circulation may be increased and respiratory rate. There is nothing whatever about glonoin to "contract the abdominal muscles" or "swell the feet." To learn what causes the "smothering spells" you will have to make a careful examination and find out just what abnormality exists in this case. It is just possible that you have aneurism or some obstruction of the great vessels. It is absolutely impossible for gr. 1-250 of glonoin to cause swelling of extremities. As a matter of fact a temporary local congestion would be dispersed by glonoin. You state that the patient has "taken granules out of the same bottle with good results." It is therefore quite evident that the medicine did not cause the trouble, but that an exacerbation occurred at the time of taking this particular granule. We have carefully tested the granules sent, personally, and there is no question as to their character or action.

Make some inquiries as to condition prior to taking the dose and find out what the patient had been eating. Also have her urine examined. Always bear in mind, doctor, that some people have a peculiar idiosyncrasy to glonoin, though such a condition does not seem to have existed in this case. Grain 1-250 is not at all a large dose. Within a minute after taking there may be some fullness of head with throbbing of the carotids, flushed face and neck. Large doses may cause vertigo and stupor, the respiration is rapid and shallow; a marked fall in vascular pressure (due to dilation of the arteries and veins of the surface) occurs. This dilation is believed to be due to a direct action on the muscular fibers of the vessels. The urine usually is slightly increased where the

vessels are contracted, as in cirrhosis; in normal individuals it is decreased upon relaxation of the renal artery. Finally, it is impossible for one granule to contain more glonoin than another; the process of manufacture absolutely obviates such a thing, and as this patient only received one granule, we feel perfectly convinced that you must look elsewhere for the origin of the distressing symptoms described. An emetic might have been indicated and had you been present to "exhibit the right remedy" the attack would not, probably, have occurred.

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 QUERY 5278.—"Use of Caustics on Angioma of Lip."—W. B., Indiana, has used dermal caustic (solution of sodium ethylate) very successfully in five cases; no failures. He now has a case of a little girl, nine years old, with a "large blood-tumor on the inside of the upper lip." It made its appearance when the child was less than two years old. An operation by a local surgeon failed to cure and now the tumor is larger than before the operation. It is a purely blood-filled tumor larger than a large walnut and pushing the inside of the upper lip out. It is not sore but bleeds easily. He asks: "I know dermal caustic will remove the tissue, but the question is, shall I be in danger of meeting with a serious hemorrhage? I am very anxious for your opinion."

We should hesitate very much to use dermal caustic on the inside of the lip. In the first place, it would be almost impossible to prevent severe burning of the adjacent structures and the saliva would practically so dilute the caustic as to render it ineffacious locally. Moreover, we fear that this is a growth which requires excision and we would strongly urge prompt surgical procedure. Hemorrhage from the upper lip may be very severe unless the artery is firmly held. This of course is more than likely to be an angioma and in this particular position is likely to consist of a mass of dilated veins and capillaries. They bleed very freely—even dangerously—if improperly incised. They should be removed in nearly every case by excision, plastic operation repairing

the defect. Electrolysis is appropriate to smaller growths, but you must not consider this a "small growth." The injection of astringents, application of caustics—and even the use of the thermocautery—are extremely dangerous in angioma of the lip.

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 QUERY 5279.—"Grip or Dangerous Kidney and Stomach Trouble."—W. S. H., Alabama, writes: "Herewith a diagnosis made by myself: This patient never had taken a dose of medicine in all his life till I gave him this treatment. His age is 57. He is well developed, never had a trace of disease of any kind; occupation, farmer. I called to see him January 22. He was peeling bark from boards when taken with aching of his joints and headache; in forty-eight hours, fever, nausea and rigors. Temperature 103°F. When I saw him first he said he did not know where pains were worst. I diagnosed his trouble as 'grip,' there being an epidemic at the time. Treatment: Calomel, 9 grains, aconite, gelsemium, syr. rhubarb, sisterium [?], squills, codeine, trional. On the 23rd, at 4 p. m.; I found him quiet, temperature 99.8°F.; was feeling very well except for a little nausea. Now I want to know whether I was right. I am always 'on the square' with everything I do. And another doctor came along and told him he had 'a dangerous kidney and stomach trouble.' Now, I have been in the harness for twenty-four years—and still hold the same territory—but have never learned 'that kidney and stomach troubles' came in epidemics."

Unfortunately we are not in possession of sufficient data to enable us to give a positive verdict. The "general body pains," with headache, nausea, fever, etc., certainly very much resemble the clinical picture of grip. We do not, however, treat grip cases as you treated this one. We should have given small doses of calomel and podophyllin, i. e., 1-6 of a grain each hourly for six doses, followed with a saline laxative, then relieved body-pains with full doses of macrotin and reduced the temperature with the "deferrescent" formula (or gelsemin), small doses at intervals to effect. Occasionally, where

the pulse is very heavy and sthenic conditions marked, veratrine is preferable.

The following will give you our idea of the treatment usually called for in a grip case. As there is invariably marked centric depression, the use of any depressant drug is contraindicated. Iodized calcium, 1 to 3 grains every hour, with two nuclein tablets will often abort. Allow practically no water for twelve hours. Aconitine, strychnine, atropine and quinine arsenate, one granule of each every half to one hour until sedation and lowered temperature, then every one or two hours as needed. Capsicin may be added. Flush nares with alkaline antiseptic and gargle with the same. Attend to digestion, clean out with calomel and saline laxative, and keep clean with intestinal antiseptic, q. s., after meals. Omit aconitine when fever falls, atropine when pain disappears, and leave your patient on three granules of strychnine arsenate, one of hydrastin, and two tablets of nuclein before meals, three times daily. Permit no constipation.

In very rare cases, where body-pains are extreme, an initial dose of phenacetin may be desirable. Now, if this man had "a dangerous kidney and stomach trouble" a prompt and full diagnosis should have been made. Anyone simply diagnosing "dangerous kidney and stomach trouble" would hardly be a safe therapist. The thing is to find out just what pathological conditions exist and whether the kidney disorder is primary and the gastric secondary, or *vice versa*. One does not treat "kidney and stomach diseases" in these days. You do not give us any information relative to the amount of urine passed or its quality, retention of food, activity of stomach, etc. Diagnosis, therefore, is impossible. We would, however, state that the symptoms as given by you resemble epidemic influenza a great deal more than they do any gastric or renal disease with which we are familiar.

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 QUERY 5280.—"Hematuria in Two-Year-Old Child." J. M. L., Texas, sends a sample of urine, voided by a child, male, two years old. Blood has been passed since he saw it first, on Jan. 7. The doctor

writes: "The blood was so profuse at the start that the urine was almost red, but gradually became of a lighter color than you will find the sample. I could not collect the 24-hour quantity, but the mother says the urine was often enough, and judging from the amount saved, the quantity was sufficient. There is no pain in passing the urine. The mother thinks the child has been passing blood for a month before I saw it. As to the cause, I have no idea. It has had fever for a day or two at a time, perhaps twice, within the last month. Father and mother seem both to be healthy, and if any poison has been carried into the blood that would cause a destruction of the red blood-corpuscles or inflame the kidneys I have not been able to find it. Please make a careful search to ascertain, if possible, the condition of the kidneys and cause of hemorrhage."

The report of our pathologist reveals a high acidity, low specific gravity, some evidence of duodenal catarrh, indican and many granular casts. This is a serious case, Doctor, and we advise you to make a very careful examination and, if possible, collect all the urine passed in twelve or twenty-four hours and note the amount. Give us also a history of the child since birth and make a special inquiry as to happenings prior to January 7. It is just possible that this child has had a fall (renal trauma). Note temperature, weight, condition of stools, skin, etc. The hemorrhagic diathesis must be excluded.

We should put this child on barley water, arbutin (gr. 1-3) and hamamelin (gr. 1-3). Wash out the bowel daily with decinormal salt solution at body temperature. The presence of granular casts distinctly shows renal involvement. Is tubercular taint possible? Under the circumstances we are unable, of course, to estimate the amount of urea, etc. Has there been any vomiting and does anemia seem to be progressive? We do not like to diagnose nephritis because in this specimen there are neither hyaline nor epithelial casts; neither is there albumin. Hemorrhagic inflammation of one or both kidneys probably exists.





**CICUTINE** is of value in spinal irritation, spasmodic cough and some forms of dysmenorrhea.—Burnett, *Am. Med. Jour.*

**AUTOINTOXICATION** from the intestinal tract is the most common cause of attacks of asthma.—H. H. SUTTON, *Medical Standard.*

**MILITARY SURGEONS.**—The next meeting of the Military Surgeons' Association is to be at Atlanta, Ga., October 6 to 9 inclusive.

**INFLAMMATORY RHEUMATISM** is a disease that is often cut short by a free diaphoresis. Pilocarpine produces this.—C. Ott, *Medical Forum.*

**PILOCARPINE.**—If pilocarpine is given in divided doses it acts as a diuretic rather than a diaphoretic and sialagog.—Polk, in *Dynamical Therapeutics.*

**ARBUTIN.**—I have success with arbutin in the treatment of urinary maladies, in fact more so than with any other remedy.—R. A. Black, *Medical Era.*

**BRONCHIAL ASTHMA.**—Sulzer warmly recommends the hypodermic injection of a milligram of atropine to stop the bronchial-asthma paroxysm.

**ESERINE.**—Vineberg treats of eserine as a prophylactic against atony of the bowel after operation, and his verdict is rather favorable.—*Surg., Gyn. and Obst.*

**QUININE IN GONORRHEA.**—Livermore says that quinine administered to patients with gonorrhea renders the disease almost incurable.—*Medical Bulletin.*

**WILL TAKE MEDICINE.**—The people will take medicine; if not supplied by the physician the patent medicine vendors will supply the want.—*Eclectic Medical Journal.*

**WHY BROMIDE?**—One of the things impossible to comprehend is how any physician can prescribe bromides when he has gelseminine, cicutine, hydrobromide and solanine from which to choose.

**NOW—GO FOR IT!**—"If one were to tell you that antiphlogistine emanated from the gates of Hades, I would not hesitate to use it if I knew it would do my patient any good."—*Southern Practitioner.*

**NUCLEIN?**—In intestinal perforations in typhoid fever, Chantemesse recommends hypodermic in-

jections of sodium nucleinate to increase hyperleukocytosis and the vital resistance of the patient.—*The Practitioner.*

**COUGH.**—The cough which often accompanies a full and rapid pulse, with or without fever, is relieved by veratrine, which is also a grand remedy for the burning fever of tuberculosis.—Price, in *The Therapeutic Digest.*

**INTESTINAL TOXEMIA.**—The absorption of toxins from the alimentary canal is the cause of many nervous phenomena, functional and chronic disorders.—Hank, *Journal of The Missouri State Medical Association.*

**CHLOROFORM AND ETHER.**—In *The Northwestern Lancet*, Arnold quoted statistics showing the deaths from chloroform to be one in from two thousand to four thousand, from ether one in from seven to twenty-six thousand.

**GASTRIC ULCER.**—The patient is not only sick, but restless and sleepless, 1-6 grain of morphine with 1-200 of atropine, hypodermically, relieves without causing the nausea of morphine subsequently.—*Dublin Jour.*

**MAKING HISTORY.**—CLINICAL MEDICINE is making history. It is giving the world some sound therapeutic information which some day will be recognized and adopted by the teachers of materia medica generally.—T. W. Musgrave.

**PICROTOXIN.**—*The Medical Record* says that G. Patterson employs picROTOXIN as a routine measure to prevent the vomiting following chloroform or chloroform-ether anesthesia. Small doses were injected hypodermically as soon as the anesthetic was withdrawn.

**ATROPINE POISONING.**—In *The West Virginia Medical Journal*, for January, F. L. Jackson contributes an exceedingly interesting paper upon "Atropine Poisoning, from Personal Experience." This is the best account of atropine poisoning we have recently perused.

**DR. THACKERAY'S UNIFORM.**—In our January number, through inadvertency we stated that the uniform shown in the picture of Dr. Thackeray, was that of the United States Army. Dr. Thackeray requests us to state that the uniform worn is that of a military organization to which he belongs and not that of the army.

**THREE GOOD PAPERS.**—In *The Mississippi Medical Monthly*, for January, H. C. Buck contributes three papers to illustrate the value of the clean-up, clean-out and keep-clean doctrine. Incidentally he demonstrates the great value of podophyllin in cases where it is indicated.

**HARD TO IMPROVE.**—*The Pharmaceutical Era* appears in its first January issue in a new dress in honor of its twenty-first birthday. The publishers have wisely refrained from making much alteration in the reading matter, which for a journal of pharmacy it would be difficult to improve.

**NATIONAL LICENSING OF PHYSICIANS.**—*The Chicago Clinic* agrees with us that licensing physicians by the federal government is an impossibility under the American Constitution, and goes on to question the advisability of such licensing, even should it be made constitutional.

**DIGITALIN.**—When digitalis seems inert, if given by the mouth, there may be rapid improvement following the hypodermic injection of digitalin. When digitalin is contraindicated by bad action or nausea and vomiting, convallamarin is better, and this is also a diuretic.—Price, in *Medical Brief*.

**DANGER SIGNALS.**—In *The Canadian Practitioner* for October, Samuel Johnson contributes a valuable paper entitled "Danger Signals in Anesthesia;" but does it not seem queer that such an article should be necessary, when we reflect that the anesthetics of which he speaks are ether and chloroform?

**NASAL DISEASE AND DIARRHEA.**—In *The Lancet*, Stenhouse records a case of diarrhea, erythema and asthma, apparently due to nasal disease. Now let him look a little bit further, and he will find the nasal disease as well as the rest of the symptom-complex due to fecal toxemia. The diarrhea points directly to this.

**ATROPINE AS A HEMOSTATIC.**—We have received a number of reports on the efficacy of atropine as a hemostatic. We are in hopes that we may receive many more. Up to the present only one somewhat unfavorable report has been received. Remember, we want unfavorable as well as favorable reports. Send directly to Dr. Waugh.

**INTESTINAL HEMORRHAGE.**—Hirtz and Simmon in *La Clinique* advise, in the treatment of intestinal hemorrhage in typhoid fever, ergotin, calcium chloride and opium internally, with ice-bags to the abdomen. We have received reports from many successes and one failure from the administration of atropine in this form of hemorrhage.

**A SLICK SCHEME.**—We knew it as soon as we saw the accounts of this new, wonderful cure for the opium habit found in Malacca! We waited for the next step. Now we see that the Zealand Anti-Opium Society is presenting the remedy. About as slick an advertising scheme as we ever have known to be pushed on the community.

**A BRAVE PAPER.**—So many pleasant things are being said to us concerning Dr. Gould's great paper

in the January number of this journal that we are constrained to ask: "Is it such an uncommon thing for a man to speak the truth bravely? Is it so very rare for a man to have the nerve to come out squarely on the topics of the day, and say what he thinks?"

**IMITATION "MAPLE" FLAVOR.**—A druggist, one of those to whom Hallberg *et al.* desire us to surrender our liberty as physicians, writes to the *Pharmaceutical Era* asking for a formula to make imitation maple flavor without the aid of pure maple syrup. The journal suggests the addition of tincture of guaiacum, deprived of the resin by water-precipitation.

**PERSPIRATION.**—For offensive perspiration, a writer in *The British Medical Journal* suggests pilocarpine, picrotoxin, or glonoin, especially the latter. He has frequently found picrotoxin successful in the sweating of phthisis when other remedies have failed. Burning sensations followed by profuse perspiration after influenza were promptly arrested by glonoin.

**PYROLIGNEOUS ACID.**—Kolipinski praises the internal use of pyroligneous acid in arthritis deformans, the action being that of an intestinal antiseptic. H. C. Wood, Jr., objected to pyroligneous acid, because it was a complex substance, the tendency of the day being toward the use of simple drugs.—*Medical Record*. He did not just say alkaloids, however.

**INTESTINAL BACTERIA AND LONG LIFE.**—When we take in account that, according to Metchnikoff's calculations, the bacteria of human intestines increase at the rate of 128 trillions each day, the larger part being found in the large intestines, can we wonder with such a poison factory within him that man's life is prematurely shortened?—Robert Bell, *Medical Times—Hospital Gazette*.

**NOT "PASSED"**—When a man has principles, we like to see him practise them. For this reason we express our deep regret to note that *The California State Medical Journal*, last issue, has a number of articles in it, commendatory of the x-ray and other therapeutic agencies, notwithstanding the fact that these have not been passed upon by the Council on Pharmacy and Chemistry.

**COURTESY—FAIRNESS.**—Dr. Evans says, in a late number of the *Chicago Bulletin*: "In view of the flattering editorial of *The London Lancet* on the Bulletin of the Department of Health, the Commissioner thinks that the public has the right to know that Dr. F. W. Reilly, the Assistant Commissioner of Health, is entitled to the credit given." And that is the sort of a man Dr. Evans is.

**U. S. PHARMACOPEIA.**—In the American Therapeutic Society, discussing the United States Pharmacopeia, Dr. Reynold W. Wilcox, of New York, said that the unfortunate showing that the Council on Pharmacy and Chemistry had made, also demonstrated the utter unfitness of the American Medical Association to undertake the far more serious work of revising the Pharmacopeia.—*Medical Record*.

**ALKALOIDS IN SOLUTION.**—A writer in *The Eclectic Medical Journal* asks why the alkaloidal people do not prepare their alkaloids in solution. If a doctor can not take granules and drop them into a glass of water, and make a solution in one minute at the bedside, he had better give a tonic. What solution does he want us to make, anyhow? Alcohol will evaporate, in water the drug will decompose.

**CONTROL OF HEMORRHAGE.**—Chase in the *American Journal of Obstetrics*, says that few conditions put the operator to a greater disadvantage than inability to control hemorrhage, either from blood-vessels difficult to secure, or oozing from surfaces where ligation is impracticable or inadequate. He might have added that this is a powerful argument in favor of the H-M-C anesthetic which powerfully checks any tendency to hemorrhage.

**PROHIBITS REFILLING OF PRESCRIPTIONS.**—Despite the organized protests of the wholesale and retail drug trade, the new Louisiana State Law unconditionally prohibits the refilling of all prescriptions. The druggists wished to restrict the law to those prescriptions calling for alcohol, narcotics or opiates. They were given a hearing but failed to convince the Board of Health.—*Pharmaceutical Era*.—Good for Louisiana!

**DIABETES INSIPIDUS.**—A writer reports a case of diabetes insipidus in a child aged four years, successfully treated by atropine. This was continued for about two months, the total quantity taken in that time being six Grams. At first about 1-150 gr. was given daily, and this was increased until the child took eighteen times this dose. No ill effects were observed beyond a slight eruption in the early days.—*British Medical Journal*.

**HYOSCINE.**—"Hyoscine applied locally completely dilates the eyelids in eight minutes."—Trousseau. The action continues twenty-four hours. We are gathering data in regard to the active principles, how soon the action is manifested and how long it endures. We should be pleased if any reader would forward us any observations they may have made on these important points, in regard to any active principle, to be embodied in our reports.

**ATROPINE WITH H-M-C.**—In *Northwest Medicine*, Benson says physicians have so long associated atropine with morphine, that it becomes hard to sever the connection, so be warned in time. "Never give atropine after the H-M-C or you will have a most crazy patient. I look upon the use of H-M-C in the obstetric chamber as one of the greatest boons to suffering womanhood. I have seen no bad after-effects in either mother or child."

**RELIEF OF PAIN.**—In *The International Journal of Surgery*, Dr. J. H. Kellogg mentions twenty-five means of relieving pain without the use of drugs. Most of them are varying applications of heat or cold. After the whole twenty-five have failed, you may relieve the unfortunate patient with a little morphine hypodermically, or a small tablet of H-M-C, far more effectually and quickly than these whole twenty-five agents would have done. Not but what they are useful in many cases, and by

all means ought to be used whenever they will answer, instead of giving drugs. The time to give drugs to relieve pain is, when those drugs are indicated as the best means of relieving the pain, not otherwise. The man who uses morphine always for pain, is almost as bad as the man who never uses it.

**H-M-C ANESTHESIA.**—In *The International Journal of Surgery* for November G. W. Thompson describes a case in which he trephined the skull in a man seventy years of age, employing the H-M-C comp. (Abbott) anesthetic, with perfect success; the anesthetic being ideal throughout the operation and afterwards. No ill effects were noticed at any time. Success followed its use in a case of severe cranial neuralgia and in a confinement case.

**NO DANGER!**—*The Therapeutic Record* says that while a dentist in the city of New York was administering nitrous oxide to a very pretty girl, she suddenly sprang up, clasped him around the neck, and could not be separated from him even by the aid of his wife. As it taxes all our energies to meet the present demand for the H-M-C tablets, we hasten to say that the reader must distinctly understand that it was *not* the H-M-C but nitrous oxide which produced such results.

**CONGRESS OF TUBERCULOSIS.**—The American International Congress on Tuberculosis and The New York Medico Legal Society will meet in annual session at Chicago, June 1, 1908. Dr. Denslow Lewis and Dr. Thomas Bassett Keyes of Chicago and Dr. E. S. McKee of Cincinnati are the committee of arrangements. The latter was named to take the place of Dr. Nicholas Senn, deceased. For particulars address Hon. Clark Bell, LL. D., 39 Broadway, New York.

**PNEUMONIA.**—To watch the heart, kidneys and the gastrointestinal tract, are the cardinal rules in the care of a pneumonia case. I refer with emphasis to the one last mentioned; because of the importance of preserving the integrity of the digestive tract in every infection, again, the tympany abdominal distention, nausea and vomiting in pneumonia, are frequent signs of toxemia. This is a further reason why hypodermic medication should be used as much as possible.—*Dierring, Iowa Medical Journal*.

**PNEUMONIA.**—Harnsberger, in *The Medical Record*, suggests that it may be possible that the pushing of artificial oxygen to the extent of blood-saturation may be the cause of death in quite a few instances, since an abnormally large proportion of this gas in the blood leads to diminished breathing movements and, if the proportion be large enough, to their temporary cessation. He strongly advocates sparteine as a heart tonic, saying he has no use for digitalis, strophanthus or nitroglycerin.

**CONSTIPATING EFFECT OF MORPHINE.**—Magnus, investigating the constipating action of morphine, says that it is the stomach that is most affected by it. The constipating effect is not produced on the sympathetic nervous fiber. The chief action is

persistent contraction of the stomach wall, in the neighborhood of the pyloric orifice. The passage of food into the duodenum is belated; the small intestine is greatly affected, colon least of all. These observations were made on cats and dogs.—*Medical Record*.

**TETANUS.**—A recent observer, finding that cholesterin and lecithin had the power of fixation and neutralization of the tetanic toxin, treated two cases of human tetanus by hypodermic injections of cholesterin, both patients recovering. The dose injected began with 15 centigrams and was increased to 1 1-2 Grams. The symptoms began to retrocede after the first Gram. In the second case 2 8-10 Grams were injected in one day. Neither of these cases was of that chronic form of tetanus of which the recovery might have been anticipated.

A "BIG ORDER."—We have once or twice suggested that the present editorial management of the Cincinnati *Lancet-Clinic* is wide awake. Just take the following extracts from a recent editorial: "To this most imperative regeneration *The Lancet-Clinic* will devote its energy. Being subservient to no faction and no pledge, it is most favorably situated for the work it has in view. Beginning with the anemic, neurasthenic, autointoxicated Academy of Medicine, other things will follow as a matter of course." That is pretty fair, for Cincinnati.

**BULLY FOR ALBRIGHT!**—Beginning with the April issue, *The Electro-Therapeutist*, formerly published by H. C. Bennett, M. D., of Lima, Ohio, will be consolidated with *Albright's Office Practitioner*, Philadelphia. There will be no change in the title, policy or management of the latter journal, the only change being an increase of the number of pages. Good wishes to the enlarged journal. It's getting better and better all the time. You are making a mistake if you are not getting it regularly. Write to Albright for a copy—better send \$1.00 and get it for a year.

**COLCHICUM OR COLCHICINE.**—In gout with gastric disturbance, Millon advises enemas containing tincture of colchicum seed and wine of opium. He administers thus a very doubtful and extraordinarily variable preparation of colchicum, in a manner where it is impossible to say how much of the dose will be absorbed and utilized. It would seem that the administration of colchicine hypodermically would be infinitely preferable. Colchicum if therapeutically active is not a drug which it is wise to use in an uncertain manner, as the effects of overdoses are exceedingly disagreeable to say the least.

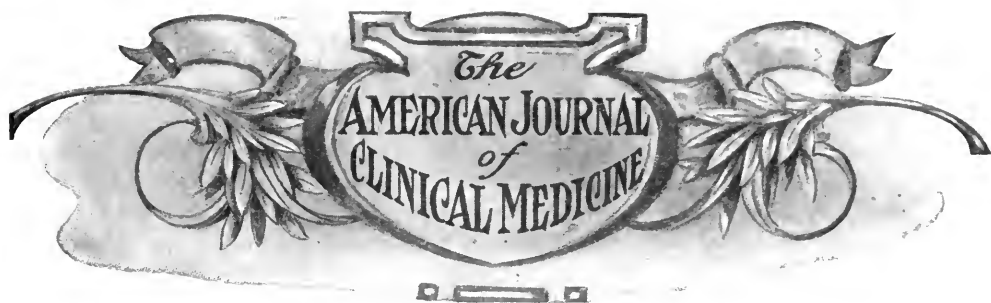
**INDEPENDENCE.**—It is a matter of great pleasure to us to note how many of the independent medical journals of the United States are coming up strongly in their denunciation of therapeutic nihilism, and their advocacy of that strong, potent therapeutics which makes the physician an active factor in the case instead of a disinterested spectator. This is an attitude which commends itself to Americans. As a specimen of what we refer to, take the following extract from *The Monthly Cyclopædia of Practical Medicine*: "A certain proportion of hard-working, conscientious physicians

who believe in the efficacy of therapeutics, and who fight shoulder to shoulder with the patient in the contest with disease, have gradually found things coming their way; and the well-dressed pessimist with the M. D. title to his name is likely to have ample leisure on his hands. The do-nothing school of medicine is gaining recruits rapidly."

**THIOSINAMIN.**—Renan recommends the use of thiosinamin in arterioscleroses, giving it hypodermically, 1 part to 25 of sterilized distilled water or normal salt solution. This is practically painless when injected under the skin of the abdomen. The injections do not produce induration. The menstrum must be cold, and the solution prepared in sterilized vessels, so that decomposition of thiosinamin may be avoided, which would be effected by a high temperature. The solution is always a little opalescent. Each injection contains 20 centigrams of thiosinamin, or a little over three grains.—*New York Medical Journal*.

**CAFFEINE IN HEART FAILURE.**—Caffeine mildly but rapidly stimulates the circulation. Its effects are felt in a few minutes. It is, therefore, adapted for cases of heart failure. It causes cardiac compression and increases arterial pressure. It is more useful as an adjuvant than alone. It is especially well combined with glonoin, where it unites diuretic effects of the one with vasodilation of the other. In large doses caffeine has been known to bring on fatal cardiac contraction. Three-grain doses three times a day have done this. It is cumulative and its effects are felt for many days, so it should not long be continued. I give it in half-grain doses, with one grain of sodium nitrite, but do not continue longer than a week. A reliable alkaloid should be obtained.—Sattertwaite—*Virginia Medical Semi-Monthly*

**ANIMAL THERAPY IN TUBERCULOSIS.**—G. B. Sweeny (*N. Y. Medical Journal*) describes a method of treatment which he has employed in tuberculosis with considerable success. While studying under Metchnikoff he became impressed with the doctrine of phagocytic defense. Believing that the immunity conferred to cattle who had been inoculated by the Behring method resided in the lymphocyte, he collected the lymph from the thoracic duct of immunized bullocks and used it in treating his patients. When this is injected into the healthy organism no reaction occurs, but when into a tuberculous patient there is a period of intoxication, usually accompanied by febrile symptoms (which may be absent if the dose is small) and a distinct lowering of antibacterial power of the cell—the opsonic "negative phase." This is followed by a "positive phase," during which the patient experiences a feeling of physical well-being. When immunity is secured there is no longer a negative reaction. Under this treatment tubercular patients tend to restoration to normality as regards temperature; night sweats become less marked or disappear, the condition of the bronchial secretions is ameliorated, cough becoming less troublesome, hemorrhages are arrested and weight increases. There are evidences of cicatrization of cavities. Cases are reported showing the possibilities of cure with this lymph.



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## THE DAY OF THE HUSTLER

The secret of the success of the "capable" man is—to go after things, not wait for them to come to him. What shall be the attitude of the physician in building up a practice?

"There were giants in those days."

**W**E have always looked backward to the golden days for our heroic era, and attributed to mankind in the far distant past all sorts of excellences, physical as well as mental and moral. But the investigations of archeologists who have opened many prehistoric and historic graves and made measurements of the armor of the Middle Ages have shown that mankind has on the whole grown larger physically instead of deteriorating.

Man has grown larger mentally also, in the aggregate. The records of antiquity show us here and there a great man, who appears great only because he stands out so far above men as they were then. But there never was a time equal to the present, when the mental development of mankind in general was as high as it is now. We firmly believe that the world is also growing more moral all the time, that the standards of morality were never so high, and that they are constantly improving.

Surely, if this world ever held mental giants, it does so at the present. Much as we may deprecate the evil that is done by the trusts, we must look with a certain admiration upon the men who are capable of welding together such combinations and

of managing them. Never before in the history of the world were such things possible.

It is a cyclopean age in which we live, and the man who expects to live and to hold his own at the present day must be up and doing. It is the day of the hustler. This is no time for Modest Worth to sit back in the corner and wait until he is dragged into the light by some stronger hand and his excellency proclaimed to the world. No race, no people, no enterprise, no man ever succeeded by hanging back. It is the strong, pushing, energetic, hard-headed "Buttinski," the one who will not be denied, who succeeds.

What use is a man's knowledge if nobody knows of it? Doctor, you may be conscious of your own superiority, of your proficiency, but what use is that to you or to anybody else, if you keep it to yourself?

In business circles one generally chooses an employee, not for what he knows but for what he can do; and out of the host of applicants for a position, that one is going to get the job who most energetically demands it. You will hear an employer say, "If that fellow will hustle half as hard to fill his position as he did to get it, he is the one we want." It is the strongest man who succeeds all the time; not necessarily

the best, not necessarily the wisest or the most learned; it is always the strongest.

Doctor, how do you size up with your fellows? Do you push in, so that you will not be denied? Do you make people see and own to your superiority? Do you thrust the weaker men aside in order that you, as the most fit, may do the work? Or do you let yourself be pushed into a corner by every ignorant pretender who comes along, because he has more force as a man? Do you sit down helplessly and let the stronger men take your patients away from you? Do you let yourself be pushed out of every desirable family by the wiles and fascinations of less-deserving men than yourself?

If you do, let me ask you this question: Are you doing your duty by your patients, by allowing yourself to be pushed out in this way? Here you are this afternoon, Doctor, sitting in your office. You have nothing to do. There is plenty of work to do in your line, and you know how to do it better than anybody else. Why don't you do it?

Well, in the first place, you are sitting here waiting until somebody comes for you, instead of getting up and going out and finding that somebody.

In the second place, you are thin-skinned, which means feeble, a weakling; and whenever anybody looks cross at you, or you think he is not satisfied, you get in a huff and throw up the case. If they so much as hint or suggest having somebody else called in, you think you cannot get out of the way too quickly. In fact, you are the unfit, who always fails; and the other man—you don't like him, I know—you consider him a big boaster, a pretender. Doubtless he is, for in a sense everyone of us is that; nevertheless, if you are conscious of your superior qualifications, why do you let *him* shove you aside?

Just now, as I say, you are sitting in your office, with nothing to do, waiting for people to come to you. Why should you wait? You know better than they that they have ailments, and that these ought to be attended to. You know perfectly well that there is many a man who is on the verge of dis-

traction from the suffering due to hemorrhoids or maybe dyspepsia or something else. Many a man has good money that he is willing and anxious to give to you (or to anybody else) for relieving him of his nasal catarrh if you would only do it. Hardly a man or woman you meet who has not an ailment for which he is eager to pay to be cured, if he could only find somebody who can cure him. You can do it, can't you? If you can't, it's your business to learn how, for that's another qualification essential to real success. You must be able to "deliver the goods"—to *prove your right to success*.

Well, but they don't know you're the man they are looking for. How are they to know it? Do you think that they are endowed with second sight, that they can see through stone walls and into your mind, and know just what you can do and what you can't do? Maybe it is lucky for a good many of us that they can't!

Take up your grip. Get out. Stop the first man that you meet. Say Hello! Talk to him, make him a friend, and before long you will have him for a patient. Keep on doing this. Put in your spare time at it. That is the way to get patients, not by sitting still and waiting for them to come to you. While you are waiting for them to come to you, the other fellow, who is presumably not nearly so well qualified as you, is hustling, without a doubt; and he is getting the business. He will be riding in an automobile before you can buy a second-hand bicycle.

Work to qualify yourself. That is right. That is your duty. Study up the new things. Hunt through every journal, every medical magazine or book that you can get hold of until you find something that is just a little bit better than he or any of the other doctors in your vicinity has been using; and when you have found something that is just ever so little better than the means that are used elsewhere, go to work with it. If you can cure rheumatism one day sooner than the other men, if you can abort ten percent of your pneumonias while they are not trying to abort any of them,

if you can make child-bearing a pleasure instead of a pain by the use of the new anesthetic, if you can break up a forming croup, or even a cold, by the use of some remedy—while the other men are telling you how worthless it is—if you can do any one of the hundreds of things we have been so earnestly pressing on your notice during all these years, get out and do it. You most surely have an advantage in some line; if you get out and work it for all there is in it, that ought to put you on the top rung of the ladder.

Doctor, is it not, after all, *laziness* that is the principal thing that ails you?

There was a poor fellow we knew in Pennsylvania, the lower half of whose body has been paralyzed for at least the last twenty years. He is rich. He got rich practising medicine, in spite of his drawback. He worked his brains, and hustled, although he could not walk, stand or crawl.

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Every great and commanding movement in the annals of the world is the triumph of enthusiasm.

—R. W. Emerson

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### POLYPHARMACY

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Wherever consistency may take refuge it certainly does not appear to be in the pages of *The Eclectic Medical Journal* for February. It contains an editorial headed "Polypharmacy Running Riot," devoted to a curious outburst of abuse of the alkaloidist for polypharmacy. Four alkaloidal combinations are quoted, one containing four active principles, another containing three, still another three, and the last four ingredients, the comment following being this: "No wonder the rebellion follows in the ranks of the allopathists when their section on alkaloidal medication asks them to father this kind of drug study. Such conglomerates remind one of their ancient shot-gun mixtures, and are enough to make an allopath of the olden time turn green with envy."

Turn over just two leaves, and on page 129, in another editorial of the same number, you will find the advice to treat diarrhea

in children by a mixture of neutralizing cordial, tincture of kino and paregoric, equal parts. Neutralizing cordial contains six ingredients besides the sugar, paregoric six, which with the kino make a compound containing thirteen ingredients. Not only this, but the hydrastis in the neutralizing cordial contains three alkaloids with distinct powers. How many different alkaloids are contained in the rhubarb the Lord only knows; and as the opium in paregoric contains at least twenty-eight active principles, no two of which act alike, the result, we must confess, looks ludicrously like polypharmacy to us.

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He who struggling ever, toils on, him we can redeem.  
—Goethe

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### YOUTH! HOW TO KEEP IT

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We have just been asked for our prescription for youth, by a kind friend who knows how it pleases a man of our age to hear such things. He asked what it was that made us grow younger each time he saw us. So we gave him the prescription as we give it to you; and whether it was one of those pleasant compliments which kindly feeling friends give you, or not, you may take the prescription for what it is worth. Here it is—it is Irish: "Be aisy, and if ye can't be aisy, be as aisy as ye can."

Don't be afraid of putting on the cap and bells occasionally, if it is natural for you to do so; and, above all things, don't pose. The dignity that has to consider itself and sustain itself by mannerisms, by strange and unnatural attitudes, is not worth the bother. Most men are grateful to you if you can make them laugh; the rest are not worth considering. The world is wonderfully clear-sighted, and quickly detects a pose. It is not worth while.

Say what you think. Speak out; and if you feel good yourself, let it show in your face, in your attitude and in your words. There is nothing quite so attractive in this world as a person who feels kindness in his heart toward all humanity, and lets it appear in his face.

As to the man who lies in wait for the chance to say and do something disagreeable to somebody, if it is your misfortune to come in contact with such a one, you will know exactly how the man felt who stepped on a skunk, and you will try and circle widely around that man the next time you happen to meet him. The skunk, however, has its good qualities like other animals: it does not go out of its way to attack you. If you let it alone, it will let you alone.

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The man who can say things in a way to make you yell with enthusiasm is an orator—that is, if you agree with him; otherwise he is a demagogue.—Gilhooley

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### SIMPLE THINGS OVERLOOKED

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A good many amusing stories have been told of our ultrascientific brethren, who go very far indeed, all around Robin Hood's barn as they say, and overlook completely a simple, obvious explanation of affairs, which has deceived them by its very simplicity.

Very likely we commit the same fault ourselves. Indeed, a valued friend wrote to us once, after we had discussed a case with him, that he thought we would probably comprehend it better if we would cease to be so confidently scientific.

However, this fault is not often urged against us, because we have always endeavored to study and teach the importance of looking first at the simple and obvious explanation, before seeking for something more occult.

A quack doctor once told us he thought of putting out to the medical profession a line of remedies for diseases, accompanying each one with an offer of five hundred dollars to any physician who could improve upon it. We asked him if he intended to keep these remedies secret, and he responded that he did, because, said he: "The physician will not buy a thing if he knows it is the commonest remedy for the disease in question; nevertheless, the commonest remedy is always the best one. For instance," he continued, "there is nothing in rheumatism that equals real, true salicylic acid, but if you

talked salicylic acid to the physician he would respond that he knew as much about that as you did. In fact he does not; for while he uses salicylic acid he seldom knows what he is getting, and he rarely pushes it until he gets the desired effect—the full one which the drug is capable of rendering, providing the true preparation from the oil of wintergreen is used instead of the cheaper synthetic one, which any druggist is likely to foist upon him."

We have recently had a lesson in this respect, in the revelation of qualities in the old-fashioned, common, every-day epsom salt, which none of us suspected. We have looked upon it so long as simply a cathartic. Why, it is only a dose of salts, that is all and everybody knows what that is. Who would have believed that hypodermically administered it was one of the most powerful anesthetics in existence, that it was a vital depressor, tending to paralyze every function in the body; and if absorbed into the blood in sufficient dose, capable of destroying life itself? Who would have believed that Glauber's salt, the ordinary sulphate of sodium, on the other hand completely neutralized this effect, and saved the life after an otherwise fatal dose of magnesium sulphate had been administered? Who would have believed that a few grains of chloride of lime were capable of saving life by stopping hemorrhage after all the regular hemostatics had failed?

Take the commonest, oldest, best-known articles of the materia medica—is there one among all of them of which we can confidently say we have exhausted its possibilities, that we know everything about it which is capable of being known? Not one. Who would have believed that guaiacol rubbed upon the skin was a tremendously powerful antipyretic?

The trouble is that we do not push our investigations to the limit. We do not exhaust the possibilities of anything. We content ourselves by scratching the ground a little bit, picking up a few nuggets that lie on the surface, so obvious that we actually stub our toes on them, but we never look underneath at the rich stores that are await-



ing us. Then when we do get to work, instead of beginning before our noses, we commence away off on the other side of those blue hills that fence in the western horizon.

Do the work that lies at your hand. Do the duty which is before you at this day, hour and minute, searching always to exhaust the possibilities of every subject—to get the most out of every remedy—to know more about it and accomplish more with it than anyone else. Take the obvious explanation of facts that appeal to you, and adhere to it until it is evident that this explanation is insufficient; but be not satisfied with the common, popular or even the "classical" acceptance of things, if these fail to satisfy your judgment. Look into things, seeking always the most direct, as well as the most simple means to accomplish the end desired. Simplicity and directness usually bring success. Try!

#### SERVING THE LAITY

*The Journal of the American Medical Association*, in its issue of February 29, calls attention to the methods of one firm of German importers, who, while they are soliciting the patronage and support of American physicians, are quietly circularizing the laity, "on the side," with a pamphlet on "Uric-Acid Diseases and Their Treatment with ——— Water." We have read the editor's comment upon this matter with all the greater interest because the proprietary which is the subject of this controversy is one that has successfully passed the Argus-eyed inspection of the Council on Pharmacy and Chemistry and been admitted to the sacred pages of "New and Non-Official Remedies."

We are glad that the *Journal* has taken up this work. All the agencies of an organized profession should be used to build it up; to strengthen the position of the rank and file; to bring into the lime-light the people who are endeavoring to help us, as well as the policies which lead to self-medication and strengthen the hold of quackery upon the public. We shall hope that the *Journal* will join us in the demand—"No dope for quackery;"

furthermore, that it will carry the battle really into the enemies' country—that it will uncover the real sources, the great sources, of quackery's unceasing supply.

If this is in your heart, we can say, "God speed you!"

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God will forgive the sinner but what he will do with the prig is still a problem. —Elbert Hubbard

#### THE PLAGUE SITUATION IN CALIFORNIA

A correspondent in California writes to us that there is some reason for apprehending the general spread of the plague over the state. The disease was spread over San Francisco by rats, which were driven out of old Chinatown by the fire, and from there scattered over the neighboring towns. He says further that this is a great habitat of the flea.

Granting that the plague infects the rats, the conclusion follows that when the warmer weather comes there is danger, providing the rats are not exterminated. Two out of every hundred rats that are examined prove to be infected with plague.

If anything is done in the matter it should be done at once; otherwise the disease may be so far generalized that California would be quarantined against by the rest of the world, with certain disaster of appalling proportions to the business interests. The time, therefore, seems to be now, before a general outbreak has taken place.

But the question is, what to do? We understand now very well that the plague is disseminated by the rats, and that through the medium of the flea, possibly of the fly, the plague bacilli are transmitted from the animals' living or dead bodies to human beings. The obvious conclusion is that we should either get rid of the flea, or of the rat, or of both. But is this possible?

It was tried, we understand, in Japan, and after the sacrifice of several million rats it was found that their number was practically the same as before. The removal of large numbers of the rodents rendered the conditions of existence less

severe to the others, and the rate of multiplication of the animals increased, so that there was really little if any diminution in their total number. It seems therefore, that to get rid of a few or even of a great number of rats has but little effect, but that it is necessary to devise some means to get rid of all the rats at one fell swoop. Is this a possibility?

Here is a chance for our bacteriologists; if they can develop or secure in any way a disease which, propagated among the rats, will pass from one to the other and destroy the whole troublesome brood, that is what we want. Readers may recollect that some years ago it was proposed to get rid of the rabbits of Australia in this manner. The plan did not succeed, and the rabbit remained until the canny Australian turned the curse into a blessing, by canning the rabbit in countless millions and shipping him off to Europe, to reappear on the festal board as the Christmas turkey. Since the rabbit became a profitable article of merchandise, we have ceased to hear complaints of his rapid multiplication.

It is not likely, however, that the rat will ever be utilized by the Caucasian as an article of food. He might appear on the table as the principal component of a squirrel pie, but squirrel pie is not so commonly used, or so popular, as to make this method of disposition applicable to the enormous number of rats.

In France, as we have somewhere heard, without vouching for its truth, the skin of the rat is the principal source of supply for the kid-glove industry, this animal alone supplying a skin thin enough, strong enough and pliable enough, for glove-making. If this were true and a price were put upon rat-skins, the small boy might be trusted with the work of extermination. Whenever any nuisance becomes marketable at remunerative rates, it is the first and the greatest step toward the extermination of that nuisance.

This seems to us a more practical idea than that of an appeal to the doubtful aid of bacteriology. Let our California brethren set up a kid-glove factory, and announce

far and wide through their beautiful state that a certain price is paid for rat-skins in good condition. Then let them make a private treaty with every circus company that at present infests the earth, and induce them to pervade the State of California. If there is a rat left in the state at the end of the circus season, the small boy has changed radically from what he was when the present writer had reached that period of his development.

As to the flea, we adhere to our frequently expressed conviction that a perfect remedy against him, and consequently against the plague, is found in saturation with calcium sulphide. How long such saturation can be maintained we do not know. We have maintained it in full activity for a month, without appreciable injury to the individual—with one possible exception—that is, the more or less complete inhibition of the sexual function during that period. Whether this is an injury or a boon might be debated *ad infinitum*. While we incline to the latter view, it is possible that many years ago we would have embraced the contrary. But no flea will bite a man who is saturated with the sulphide; consequently such a man is immune against the plague. Many a man is immune without knowing it, because, also without his own knowledge, he is permeated with sulphydric acid, generated in decomposing fecal collections in his bowels.

In the meantime we would suggest that California is an excellent field for the exploiters of new and old forms of rat traps and poisons, other devices for ridding the community of these troublesome rodents. Even if all the animals cannot be destroyed, each one which is destroyed lessens to a certain extent the danger of plague infection.

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Let nothing come between you and the light.

—Henry D. Thoreau

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### DO YOU KEEP CASE RECORDS?

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It is a pity that most physicians depend wholly upon their memory to record their experiences. Many and many an important item is lost to themselves and the rest of

the world. The habit of note-taking on one's cases is difficult to establish, but after once being established, if it is done in the right manner, it will require little time and is of great advantage. Here is our suggestion: Get your favorite "Practice," and of course that means our "Alkaloidal Practice," bound with numerous interleaves, and then whenever you have anything of interest come up in any of your cases, note it down briefly upon these interleaves. A line is enough to retain thought or observation. If the doctor will take a half hour each night for this purpose, it is wonderful how quickly the record grows, and how soon the recording ceases to be a labor.

Just think, Doctor, if you could recollect all the interesting points you have observed since you first began to practise, what a tremendous volume it would make, and how you would value it. For lack of this we are constantly repeating our experiments over and over again.

This matter was brought forcibly to the mind of the writer, when in the treatment of an exceedingly troublesome case of disease of the colon he suggested to an assistant that he thought of applying locally a certain silver preparation. The assistant at once remarked that it would do no good, for we tried it on a similar case two years ago, and the only result which it had was to ruin the bed linen by silver stains. We had altogether forgotten it; our assistant's memory was correct; we had tried the treatment thoroughly and it failed. How many treatments had we tried in this case and failed! How much lost time would have been saved if we had kept a record of every experiment we had made in this case, and cast it aside permanently when the failure was evident.

It costs but a trifle to have your book bound in this manner, but the records so easily kept are anything but trifling in their value.

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#### THIOSINAMIN

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*The Medical Bulletin* describes some recent observations made in France on the

treatment of deafness, by Lermoyez. The treatment was limited to purely adhesive cases, cicatricial or catarrhal. Thiosinamin was employed locally in instillations through the eustachian tube, or by irrigation of the canal; the only other treatment was systematic massage of the tympanum. Eight cases were benefited by the method. Every evening the patient's ear received a bath of a hot solution of thiosinamin-antipyrin. Twice a week he practised pneumatic massage of the tympanum. In general, by the fifteenth day there was a decided improvement in hearing, most marked in cases of cicatricial adhesions following cured otorrheas, or where a large perforation permitted the penetration of the solution into the tympanum. In refractory cases tubal injections were practised.

The solution was neither irritating nor painful when injected. It consisted of 15 parts of thiosinamin,  $7\frac{1}{2}$  parts of antipyrin, and 100 parts of distilled water.

The solution was sterilized and two or three drops only used at one time.

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'Tis a life long toil 'till our lump be leavered  
The better! What's come to perfection perishes.  
—Browning—

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#### GET BUSY, DOCTOR

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Last month we had an editorial to remind you of some occasions on which it is wise to "go slow." There are many times when the doctor should act with thoughtful deliberation; but there are other times which demand action, and quick action—in other words, where you should "get busy". Here are a few of them:

Get busy when you have a case of shock, collapse or hemorrhage. Delay may mean death. Give your patient glonoin and strychnine arsenate at once, following with atropine to maintain the effect upon the circulation.

Get busy when a patient comes to you with cough. It may be only a "cold," but then a cold may be the precursor of pneumonia, or the cough may be an early symptom of pulmonary tuberculosis.

Get busy with that case of pneumonia. If you commence the alkaloidal treatment early enough you may abort the disease; and you surely will cure your patient if the right remedies are given from the start. But if you "go slow" the chances are all too great that your patient may die.

Get busy in appendicitis. When a patient comes to you complaining of pain and tenderness in the right ilioinguinal region, with rigidity of the rectus muscle and elevation of temperature, secure absolute quiet, administer hyoscyamine and strychnine arsenate, clean out the lower bowel, and if improvement is not noted within a few hours operate, or send for someone who can.

Get busy when the baby has convulsions. Don't assume that this is only a case of "teething fits" and that all that is needed is a hot bath, a dose of calomel and some "bromide." Find out what is the cause of the convulsions and go for that—and do it quick.

Get busy with that case of whooping-cough. Get the notion out of your noddle that the baby is going to cough and whoop for six weeks—if it doesn't die first. Clean it up. Saturate it with calcium sulphide and control the spasms with monobromated camphor and atropine. You will be surprised to see how quickly it will get well.

Get busy with every case of rheumatism. If you are graduated from the "six-weeks-and-red-flannel" idea of treatment, you should prepare to go beyond the salicylate method and try the really modern ways. Keep your patient cleaned out with saline. Keep his bowels aseptic with the sulphocarbolates. Alkalinize the urine with calcaith and give colchicine until you get the physiological effect. You will revise your old notions about rheumatism before you get through with that case.

Get busy when a patient comes to you with a badly coated tongue, anorexia, malaise, nosebleed, feverishness. This may or may not be the beginning of typhoid. Don't wait to find out. Treat it as it if were typhoid by cleaning out thoroughly and giving the sulphocarbolates to effect. The

chances are that you will save your patient a long and expensive illness—if not his life.

Get busy with that troublesome case of gonorrheal rheumatism which every doctor in town says he can't help. Here again thoroughly saturate with calcium sulphide; this, with local applications of colloidal silver ointment, added to the "clean-out and clean-up method" will add to your laurels and boost your reputation.

Get busy in every case of pain. Nothing reaches the heart of a patient more than quick relief of suffering; but don't, I beg of you, think first of the hypodermic needle and morphine. There are often other remedies which are just as effective and far safer. In cases where morphine will fail something else may bring success.

Get busy with the literature of your profession, reading, studying, investigating, looking for new ideas, new methods, and where they seem reasonable, try them out in practice. Don't be a mossback.

Get busy with your business methods. Bring them up to date and adopt modern methods of accounts, of keeping case records, Earn good fees and then make it your business to get them.

Get busy with your office. See to it that it is commodious, pleasant, furnished with everything needful for the comfort of the patients and your own convenience. Supply yourself, so far as your purse will permit, with every instrument or appliance of real value in your work and to make you a better doctor; but avoid mere showiness and the intricate apparatus whose theory and use you do not have the time or inclination to master.

Get busy with the things which add to your comfort and that of your family. Plan first for a pleasant home amid desirable surroundings. Have books, music, pictures—all the comforts you can afford—for your wife and family; an ample professional library for yourself; good horses and comfortable carriages in the barn; an automobile if your tastes tend in that direction.

Get busy in the community. Make yourself indispensable to the social life of your town and county. Take an interest in the churches, clubs, lodges and business organi-

zations of your city. Help stir things up. Be a booster—but we beg of you, keep out of partisan politics.

Get busy with your fellow practitioners. Do all you can to bring them into closer social and professional relations. Make your local medical society a real factor for the doctor's betterment, not a dry-as-dust depository for the unloading of useless medical lore. Help to weave the medical men of your community into a strong, mutually helpful and respected body.

Get busy with your own mental furniture. Don't fail to give it a frequent overhauling. Throw out the rubbish and fill your mind with the ideas and the methods which are likely to be of the most practical benefit to you and your growing family of patients, and the greatest resource and comfort as you grow in years.

Get busy with the incubus of precedent and authority. Learn to stand on your own feet. Think, and translate your thoughts into action. Then pass them on to your fellow men and to humanity. Don't stagnate. Be alive and let others know that you are alive.

Get busy, Doctor, in these ways and in every other way which is right and helpful, and we predict that you will—"keep busy!"

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#### "GOOD ADVICE"

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When you are giving your son the benefit of your experience, laying down the law to him as to what beliefs he shall subscribe, and as to what he shall do, are you laboring under the hallucination that he is going to profit by what you are telling him? Not in the slightest degree. You point out the old hat to him on the boardwalk, and tell him there is a brick concealed in it; that you have stubbed your toe against that brick. Do you suppose for a moment that is going to deter him from kicking it and doing the same thing? Not on your life. It only inspires in him an irresistible curiosity to know whether you are right or not, and he will stub his toe against it just as you did.

Go back a little, and recall how your father told you these same things, giving

you the same sage advice, the same deductions from bitter experiences, proved the fact, possibly. Just then you were thinking about how you would manage to get off and go fishing that afternoon, or whether you could not cut out John Smith and take Jennie Jones to the party or home from prayer meeting; and you heard it without really hearing, comprehending or allowing his words or the thoughts they represented to effect a lodgment in your brain. Men are but grown-up children, the most of us, and they listen to the admonitions and the advice of their elders and betters in much the same manner as we did when we were boys.

The net result of the advice we lavish on the young is a relief to our own conscience. So it should be. Curiosity is by no means a feminine state. It is inherent in every thinking, sensible man. Were it not for curiosity, progress would stop, and conservatism become an iron-bound rule.

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You can't avoid trouble even by minding your own business. Look at the lobster! He doesn't say anything to anybody, yet he's always getting into hot water.  
—Gilhooley

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#### AN APPRECIATED COMPLIMENT

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We always go carefully through "The Red Back"—as Brother Daniel of *The Texas Medical Journal* affectionately calls that inimitable publication of his. You can imagine our pleasure when we saw in the February number the following item about ourselves:

*The American Journal of Clinical Medicine* for January is a splendid production, both as to extent and variety of contents, and mechanical get up. It does great credit to its founder and editor-proprietor, "Square Deal Abbott," as we shall hereafter call him. Moreover, it is embellished with a large portrait of Dr. Abbott, in colors, and his autograph—"Yours for a Square Deal, W. C. Abbott." I have framed it and hung it over my desk, where it will serve as an inspiration to renewed energy, whenever I experience, as I sometimes do, that tired feeling and sigh, "What's the use?"

From no one do we appreciate a compliment more than from Daniel. He is one of the unfenced and unharnessed; and he says what he pleases, when he pleases and as he pleases. For vigor of expression

and originality of style, why! there's nobody like Daniel!

"The Red Back"—do you know it? It's in a class all by itself. Nothing like it; nothing better; original, wise, witty and always well-spiced by Daniel himself. We hope that every Texas reader of *CLINICAL MEDICINE* also reads "The Red Back," and it should have thousands of readers all over the country.

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We must have a weak spot or two in a character before we can love it much. People who do not laugh or cry, or take more of anything than is good for them, or use anything but dictionary-words, are admirable subjects for biographies. But we don't care most for those flat pattern flowers that press best in the herbarium.

—O. W. Holmes

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### VERBENIN IN EPILEPSY

In *The Journal of Therapeutics and Dietetics*, the new associate editor, Dr. J. M. French, contributes an exceedingly interesting paper on "Verbenin and Its Application in Epilepsy." He sums up-to-date all that has as yet been printed on this interesting drug, and gives the results of his use of it in three cases. He comes to the following conclusion: The cases most likely to be benefited by verbenin are those in which the action of the bromides is unfavorable. It is suggested by those who have used solanum and verbenin in epilepsy that these two drugs are complementary to each other, the one helping those cases which the other does not. It is further claimed that verbenin is specially adapted for cases of menstrual epilepsy, that is, those brought on or aggravated by menstruation. The action of verbenin on the nervous system is that of a tonic, strengthening the patient's mental powers and giving him a more pleasant aspect. He has seen no indication that verbenin is an emetic, expectorant or sudorific. Its new therapy will overthrow the old.

We are pleased to see this paper. It is an evidence of that reviving interest in drugs which is so manifest all over the country. In the past it has been the rule for somebody to suggest a drug as useful in some disease, contribute to a journal or to a medical society a paper containing the results of

his observations; he is listened to with interest, a little correspondence is elicited, and then the whole matter is forgotten. Nothing comes of it. It is a barren effort. Just as soon as you stop pushing a drug which has no commercial interest in it, it falls flat. There are so many drugs forced upon the market with commercial interests back of them, that one like verbenin, which is common, easy to get, and can be supplied by anybody, consequently does not interest the specialists in medical monopolies, has scarcely a chance of showing its nose.

But there is one set of men particularly interested in drugs as such, that is, the medical profession. What interests us more than anything else, is whether these things are useful to our patients, and good things for us to have in our practice. That is *all* that interests us. We do not care at all whether the man who proposed the drug first is white, black, red or yellow; whether his nose is Roman or tip-tilted; whether he runs with the gang, or is a medical mugwump. We want solely to know whether we can make use of his idea ourselves. It is a pity that all physicians do not bear this constantly in mind. If they did, they would not suffer themselves to be sidetracked, following out blind leads, frittering their attention away on frivolous issues.

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### CRUELTY TO SICK CHILDREN

In *The Chicago Tribune*, January 12, is a most suggestive item of news: A sick child in that city resisted the administration of medicine so strenuously that the parents called in a policeman, who held the child and by physical force and official authority compelled the unfortunate little creature to down the nauseous dose.

What an outrage! It is hard to believe that after half a century's experience, any physician should be so inconsiderate of his own interests and of common humanity as to fail to recognize the harm that could be done a suffering child by such a procedure. Especially as compared with the perfect ease experienced by the homeopathist in administering his pellets.

This one thing alone, we believe, has been responsible for much more than one-half of the homeopathsists' success. When the mother found that the little sugar pellet, or the tasteless solution in the glass, relieved her of all the trouble of giving nauseous doses, and that the child did not really die after all, but, come to think of it, was just about as likely to get well as when the old-fashioned crude abominations were crammed down his throat, the nicety, the delicacy of the doses, appealed to her in every way.

Of course there was necessarily a question as to the efficacy of the medicine, in such maladies as did not tend to recovery in due time, but in which the active intervention of the physician with potent remedies was requisite. But such occasions were to the mother, ignorant of medical matters, not so common as we ourselves see them, and besides, the drug therapeutics of the regular profession of that day was beneath contempt.

Now it is different. We have had half a century of competition with our homeopathic brethren, and we cannot say that we have so very much of an "edge" on them after all. Our own therapeutics is now undergoing a revolution, and out of this is being developed a therapeusis which has nearly all the advantages of the homeopathist as to ease of administration, with a dynamic force back of the medicines far superior to the old line of galenics.

The physician who fails to realize the importance of these things reminds one of the ant which, carrying a burden, meets with an obstacle, and instead of stepping with ease to one side and going around, persists in laboriously dragging its load over the obstacle with the expenditure of infinite labor.

But it is not the physician's side of the matter which appeals to us, so much as it is that of the child. Surely, when a child is sick enough to require dosing, he ought not to be subjected to such an ordeal as described in *The Tribune*. Frightening the child, by an appeal to that ogre of the law, the policeman, holding the struggling little creature while the dose is forcibly rammed down his throat—what excuse can there be for it! What pos-

sible power could there be in the medicine, which could equal the harm done to a sick child by such a procedure? It is simply barbarous! We sincerely trust that the physician knew nothing at all about this procedure, and that at his next visit he promptly remedied matters by administering to the child medicines which did not require a struggle to introduce them into his system.

The use of the active-principle granules has therefore, among its numerous advantages, the very important one of acceptability to children. Really, the doctor may be 'way-up in laboratory matters, Widal reactions, cryoscopy, opsonins, etc., but how about all these if the homeopathist has the patient?

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Just because a man can break a broncho or win a prize-fight, it's no sign he can manage a woman.

—Gideon Wurdz

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## THE NAVY SURGICAL CORPS

The report of the Surgeon-General of the U. S. Navy for the past year is an interesting document. The year closes with 58 vacancies in the medical corps, there being 260 officers available for service. It is unfortunately the case that the difficulty in obtaining recruits is increasing, there having been 38 vacancies in 1905, 44 in 1906.

Surgeon-General Rixey enumerates as the conditions which prevent applications of men qualified for the service, the disproportion of the grades, sluggish promotion, and the deprivation of such titles as the army medical corps has enjoyed for years. Every effort has been made to attract properly qualified young physicians. Medical officers have been sent to the schools in Philadelphia, where they addressed the graduating classes of the three principal colleges, visited the various hospitals, and interviewed the resident physicians. Circulars of information had been sent to medical officers stationed in the vicinity of medical colleges and civil hospitals, to be distributed to likely candidates.

Seventy-four permits were granted for examination, but only 43 of the candidates presented themselves. Of this number 6

were rejected for physical disability, 10 were rejected professionally, 8 withdrew, and only 19 were found qualified. Out of 22 examined for acting assistant surgeons 11 were found qualified.

The difficulty is so simple that it seems incredible that Congress should fail to realize and remedy it: Certain qualifications are necessary to the men in whose hands the lives and health of the naval officers and men should be entrusted. These qualifications as exacted by the examining boards are no higher than they should be, in justice to the responsibility imposed upon naval surgeons; but the rank and the pay for these services are not sufficient to induce properly qualified men to accept the position. The Government wants men who are worth ten thousand dollars a year, and asks them to accept less than one-fifth of this sum. It requires that the navy surgeon should be a man with the education and breeding which make him a creditable representative of his country when he comes in contact with the officers of foreign navies. The rank assigned to these men in our Navy, however, is, to say the least, not attractive to those whose qualifications meet these requirements. It is a simple matter of supply and demand; if the supply does not equal the demand, we must raise the price. The men are to be had. You are not offering wages enough, and the difficulty will continue until you do so.

Dental surgeons, naval nurses, and many other interesting topics are discussed in this report.

#### A HINDOO BELIEF

*The Hospital Assistant* is a little medical journal, published in Kolhapur, India, by natives of that country.

The number before us contains a curious account of a popular belief concerning snake poisoning: The natives believe the cobra is attacked by a blister of the upper jaw. This blister is opened by the warm breath of some animal, and thus relieves the snake. To attend to this it creeps up to any individual sleeping with his mouth open, in the night,

and keeps its head in front of his mouth for some time, when the blister bursts and the contents are dropped into the mouth of the individual and swallowed; thus producing poisoning. The treatment is to promote vomiting. Three cases are mentioned. In the first case one-half pound of tobacco was administered and produced vomiting; this was followed by cramps spreading over the muscles of the body, convulsions, restlessness, eyes sunken, conjunctivæ red, extremities cold, pulse small and frequent, thirst great, moaning, cold perspiration on head and chest. The treatment was potassium bromide, grs. 20; spir. ammon. arom., mims. 40; spir. chloroform, m. 15; brandy, 2 drms.; water, to make one ounce. The patient died.

It seems quite evident that the death of the patient was due to the tobacco.

The hospital assistant in India is a graduate of a medical school, who has passed his examination after a four years' course. These men form the rank and file of the medical corps in India and do the bulk of the work in its innumerable hospitals. For this they receive the munificent salary of 25 rupees per month, or something like six dollars.

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Not one of us likes to be wholly forgotten. A posthumous glory is better than none; a living remembrance sweeter than all.  
—F. W. White

#### ANY BIAS HERE?

*The Therapeutic Gazette* for February gives editorially what purports to be an abstract from Gauss's report on scopolamine-morphine anesthesia in labor. A few lines are appended from Steffin's review. The favorable conclusions from Gauss are judiciously omitted, likewise all the great work of CLINICAL MEDICINE and other unprejudiced publications.

The "judicial" nature of this abstract and its back-up-regardless-of-fact intent may be noted from the closing clause: "It is important to take note of these cautions lest careless use of the method result in unnecessary sacrifice of infant life." Try, if you can, to assimilate that remark with



Gauss's statement (to say nothing of the freely expressed favorable views of thousands of others) that while there were forty-nine deaths of infants in one thousand obstetric cases previous to his use of the new anesthetic, there were only twenty-nine in the thousand cases delivered under this anesthetic; not one of these twenty-nine, he frankly admits, being traceable to it.

Sometimes writers exhibit a partiality for one side and a dexterity in concealing the evidence against the other, their side, which can only merit the contempt of the reader who knows what is the truth. Here is a good illustration.

### GET RID OF FLIES

In the useful little booklet put out by the Arlington Chemical Company, entitled "Insects and Disease," Section II, the following means are suggested for the destruction of flies and for the prevention of their development: The use of screens is advised. Infection of flies by disease should be prevented by the prompt disinfection of sputum and feces. Open wounds should be protected by bandages. Box privies should be abolished outright. If no sewer system is available the earth closet should be used. To prevent the breeding of house-flies, the problem is simply to exclude them from the excrement in which they breed, or to treat this substance with something which will kill the maggots, while not spoiling it as a fertilizer. Such a substance is found in chloride of lime, which is cheap and easily applied every few days to stable accumulations. The manure should be kept in a closed box or holder of some kind with doors of solid metal or wood, not wire gauze, which is soon corroded by the chlorine fumes. In isolated houses in the country the farmer need only look after his own stable and privy. In towns and cities concerted measures must be agreed upon by all owners of horses.

It seems a simple matter, and yet it is not.

Manure is deposited anywhere on the street. If it is at once cleaned up and gotten rid of, the breeding of flies is prevented then, but this is impossible on country

roads. But, as said in the pamphlet, it is not a difficult matter for every person to see to his own premises and his own stock, and if this were done the nuisance would be immensely decreased if not altogether abated.

The only way to get at this matter is to keep everlastingly at work, impressing people with the dangers which result from the house-fly. It is because this danger is not realized that the difficulty exists. People have been accustomed to the fly so long that they consider it as a matter of course, and the dangers of infection from these sources are treated as the vaporous imaginings of theoretic men, instead of being actually proved scientific facts. We can only accomplish the object by the continuous inculcation of the knowledge of such facts, which finally reaches that degree of development that people as a whole feel it, act upon it, make it a part of their lives. It is up to us as physicians to inculcate these truths persistently until people generally *live* them.

To have what we want is riches, but to be able to do without is power. —George MacDonald

### "AMERICAN MEDICINE"

*American Medicine* has changed hands, and Frank Clark Lewis appears as the managing editor, the mailing office being Burlington, Vermont. One more instance going to show that Philadelphia, which calls herself a medical center, cannot yet support a really live medical journal. We wish luck to Dr. Lewis. He is undertaking a great task. Without drawing any comparison between Dr. Geo. M. Gould and our other brethren of the medical editors of America, we may say that we have looked upon Gould as a great man, a great editor. Absolutely fearless, absolutely honest, with scientific and literary attainments equalled by few, Gould has commanded attention from the day he mounted the editorial platform. As medical editors we do not feel that we can afford to lose Gould. Had we the cap of Fortunatus it would not be long before he would be at the head of that journal in America which, more than any other, needs just such a head.

Meanwhile, Dr. Lewis's first editorials are hopeful. He takes hold of the advertising problem in a sensible, independent, yet not pugnacious manner. His position on American Medical Association matters is what we have always held; and not only we, but every man who claims the right of independent thought and action. A study of this first number under the new management is altogether promising.

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Only a few live in the light of full knowledge; many are in the umbra of complete darkness; while the majority are in the penumbra, or partial shadow-land, where half knowledge leads to false experiments and wrong conclusions.  
—James Foster Scott

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### TREATING PNEUMONIA

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In *The Journal of the South Carolina Medical Association* for November appears a very thoughtful paper by W. J. Burdell upon "Pneumonia." This paper was read at the annual meeting of the South Carolina Medical Association last April. Dr. Burdell gives a very carefully prepared brief of the pathology of the disease; rightly claiming that upon a clear understanding depends successful treatment. If we know our pathology and the action of our drugs, the treatment of disease is not difficult. He states that during the past year he has treated more than twenty cases of this disease with better results than ever before. During his ten years of practice he has treated over two hundred cases of pneumonia, using every method of treatment heard of.

The treatment employed by him during the last year was the dosimetric, or alkaloidal. In only two cases was the crisis later than the seventh day; in twelve of them it occurred before the seventh day. In three cases the disease was jugulated. He accepts Rosenow's suggestion that this is an acid infection, and uses Billings's suggestion of giving alkaline drinks.

In the first stage of pneumonia, the pulmonary capillaries are over-distended, that is, the vasoconstrictor is weakened; this indicates digitalin. But as there is no reason to believe the total amount of blood in the

body to have been increased, there is evidently a smaller amount of blood in other portions of the circulatory area, the vessels being therefore in a state of vasoconstriction, or spasm. For this aconitine or veratrine is indicated. He confirms the observation that when these two remedies, digitalin and aconitine, are administered together, each is appropriated by the cells which require it; digitalin contracting the dilated pulmonary capillaries, while aconitine relaxes the contracted vessels in the other portions of the body. Digitalin is also a heart sustainer and therefore valuable. Veratrine is also an eliminant. For convenience he employs the dosimetric triad, and defervescent compound, giving one of either of these every half hour until the effect has been attained, that is, the fall of the fever to near normal, or profuse sweating; thereafter frequently enough to keep the fever down. In sthenic conditions the defervescents are used, in asthenic the triads.

In all cases the bowels are emptied, for which purpose he prefers calomel and podophyllin followed by a saline laxative. To guard against fermentation and render the bowel aseptic an intestinal antiseptic should be given. He prefers the combination of lime, sodium and zinc sulphocarbolates. He believes that much of the fever in pneumonia as well as in other diseases is due to absorption of toxins from the bowels, and has found that this method has proved the best means for preventing that condition. When the daily stool is nearly odorless he lessens the dose.

This is the fundamental treatment, but other remedies may be called for in individual cases. For troublesome cough with scanty expectoration he gives minute doses of emetine every hour, or of apomorphine; for nervousness, cicutine hydrobromide, although if aconitine, etc., is used this symptom is conspicuous by its absence.

The diet is light and nutritious: home-made beef-extract, soups, etc. Milk should be carefully watched as it is prone to ferment. He never uses alcohol in any shape in pneumonia. If crisis is delayed beyond the fifth day he gives one-half to one grain of pow-

dered extract of echinacea, every three or four hours.

During convalescence the patient receives strychnine, iron and quinine, and plenty of fresh air. All excreta are to be disinfected, the mouth washed with an antiseptic wash several times a day, the nares douched at least once daily with either listerine or glycothymoline.

The notes of three cases follow: The first was an alcoholic case, a mulatto who got drunk, went to sleep by the roadside, was found there and carried home. The next morning he awoke with a headache and a chill, the temperature going to 105.2°F, pulse 108, breathing panting, 35 to the minute, agonizing pain in the right axillary region. Dulness over the lower part of the right lung, tympanitic resonance over the upper part, fine crackling rales over the affected area. The murmur a little more bronchial than should be. Coughing constantly, getting up a little tenacious sputum with occasionally some blood. He was placed upon the treatment described; two days later he was reported as much better and almost well; back at his work on the sixth day.

The next was a case of a white girl, 15 years old, taken with similar symptoms, December 30; on January 2 she was helping her mother about the house.

The third case was a farmer, age 44. Jan. 29, while fighting a fire in the woods, he got overheated, drove four miles without changing clothing; returned home, was much nauseated; headache followed by a severe chill set in at 4 p. m., lasting two hours; vomiting many times. The next afternoon his temperature was 105°F., pulse hard, 100, respiration from 40 to 50, breathing panting and agonizing, constant short suppressed cough, expectoration frothy and at times tinged with bright-red blood; right axillary pain; bowels had not acted since the day before; the urine scanty. Percussion revealed dulness over the lower lobe of the right lung, increased resonance over the upper part. Auscultation gave bronchial breathing over the affected area, with crepitant rales. The same treatment was begun, with the addition of apomorphine. The next day he was

easier, the temperature still 104°F.; the bowels had not acted, so he received an enema of half a pint of kerosene oil, through a colon tube, followed with a soapsuds enema. This started the bowels, and the expectoration became more profuse and rusty. The next day he was sweating profusely, temperature 100°F, respiration 20, no pain; the sputum profuse, a little blood at times. The aconitine was lessened, emetine and apomorphine stopped. The next day he sat up in bed though weak. Out in three days.

One case ran about two months, winding up with an empyema, but he recovered.

The whole paper is an admirable one, its tone sensible, absolutely free from anything like boasting. His results are such as we may reasonably expect when reliable medicinal agents are placed in the hands of men who know how to apply them.

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#### THE DIFFICULTY OF LIMITATION

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We all have our limitations, and well is it for us when we have ascertained them, and learned, possibly by bitter experience, to be saving of our strength. We will accomplish very much more if we never try for anything that is beyond our capacity.

One of the things that we freely acknowledge to be beyond our capacity is the task of publishing all the good material we receive. Our pigeon-holes are crammed with clinical reports that are actually too good to be returned to the writers, and yet it would take five hundred pages of CLINICAL MEDICINE every month to use all of them.

Some of our readers may suggest, and very justly, that we might with advantage publish their communications instead of some that do appear in our pages. From the writer's standpoint there is a good deal of truth in this; but please never forget that the viewpoint of the editor is necessarily different from that of anyone of his correspondents. Certain articles appeal to us as especially deserving insertion, because they treat of diseases which happen just then to have more than usual prevalence, or concerning which we are receiving more than the usual number of inquiries for informa-

tion. Sometime the favored articles come from a section of the country in which we have particular reasons for desiring to stir up an interest; or upon some mooted point on which valuable information is afforded by these papers. But after all we will frankly acknowledge, that for every paper we publish we have from five to ten that are as useful, as good, and between which the only way of making a choice would be drawing lots. A suggestion has just been made by which we may utilize more of our material; it is that under the heading of "Active Principles," we could extract the essential idea from an article and give it without the case-records or anything else. Of course it would not be as good, and it might offend some. But it would enable us to give in one page the substance of many articles, and that is a consideration.

#### FLETCHERISM

Do you know what Fletcherism is? Have you ever heard of it? If you are in the habit of perusing the half-baked, wholly ignorant journalistic abortions that arrogate to themselves the denomination of New Thought, you are probably familiar with the term. Here is a description of Fletcherism by one of its advocates: It consists briefly in chewing all food taken into the mouth to a milky consistence, chewing it, tasting it, enjoying it, until it is involuntarily swallowed. All fluids that have flavor should be sipped. As an instance of what is called the "spiritual side" of Mr. Fletcher's work, he warns his followers not to eat when angry or mentally disturbed.

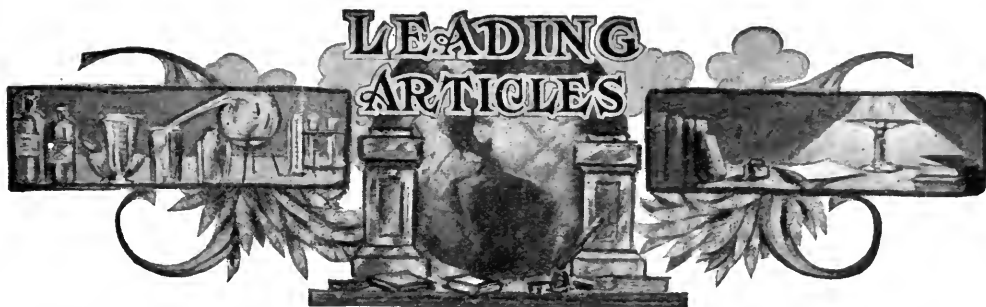
The value of these suggestions is evident. To physicians they are about on a par with the truths we first learned in the primary schools—the alphabet, the easier of the multiplication tables. To any individual not professional, but of ordinary education and common sense, they are trite, banal, commonplace. Is there a school-book on hygiene which fails to clearly enunciate these same commonplace truths?

Nevertheless, we are not disposed to criticise Mr. Fletcher and his adherents,

and in point of fact do not specially care if he does get some *kudos* out of the matter. Knowing things and practising them are different; and while it might be difficult to find any ordinarily educated person who would not acknowledge the truth of these axioms, when you ask them whether they put them into practice, that is another matter. It does good always to the community to have these primary truths put forward under new names and in new shapes. Whenever a man like Fletcher can invent them it is good, because here and there is a person who will take the thing because it is a novelty, but who would not otherwise have done so; and for a time, until something else occupies the wavery intellect, some benefit will result.

The amusing thing about it is the attempt to find an occult meaning to this simple matter. Grace Cooke says: "The entire universe is a rate of vibration, or many rates of vibration. There are tones above those we can hear and below them, because the rate of vibration is too high or too low for the ear to sense. Hence we being a rate of vibration, our food is a rate of vibration, and it is important that a man vibrate in unison with his food. Hence it is important that you should like your food." Of course the reader follows the argument—it is very easy to do.

Here is another gem, also from Grace: "It turns out that the smaller quantity is the proper quantity, and the larger amount was the rate of indigestion and illness." Sure! In other words, people disorder their digestion by eating too much; but that of course is a rough masculine way of looking at the matter, when we fail entirely to catch the "inner sense;" hence we fail altogether to harmonize with Miss Cooke, when she says that Fletcherism seems to her "so nearly a completely spiritual matter that it appeals to me with the force of a creed rather than a system." To us who are lacking in this inner light, it seems quite sufficient to say: "Keep your bowels clear, eat properly, physiologically, and don't eat too much." Many a worse creed has been adopted by vast masses of humanity.



## DRUG APPLICATIONS IN CHRONIC BRONCHITIS

An enumeration of some of the most important remedies of value in this disease, with the indications suggesting their employment

By WILLIAM F. WAUGH, M. D., Chicago, Illinois

IN this article I shall not discuss the treatment of chronic bronchitis in its entirety, nor the external applications of various remedial agents, preferring to limit my consideration to drugs that are administered internally, and the various reasons that prompt us in the selection of one or other of the numerous agents that are at our command.

There is little fear that the non-drug treatment of this or any other disease will fail to receive due consideration. We have had these things drilled into us until they become somewhat tiresome, and unfortunately, in the meantime the young physician is left to grope in a bewildered manner among the numerous drug-remedies that are offered him, with scarcely so much as an attempt to give him guidance in their selection. I therefore present some considerations on the action of these remedies, which may serve to show in what sort of cases each may be exhibited with advantage.

### *Some of the Tonic Remedies*

The *arsenates* are of value as general tonics, and in emphysematous or asthmatic cases whenever there is a distinct nervous element presenting. In anemic cases and when it is desirable to check a redundant bronchial secretion, iron arsenate is of value. This may

be administered to adults in doses of a milligram every two hours while awake, or a centigram before each meal.

*Quinine arsenate* is a better selection when there is some fever present, or whenever the general antiperiodic or tonic effect of quinine is desirable. As it has recently been shown that quinine increases the number and activity of the leucocytes, it would seem that in all infective cases it might be administered with advantage—and what case of bronchitis is there that is not infective? The fact of such a disease becoming chronic shows one of two things, either that there is a persistent cause still actively at work keeping up the disease, or else the powers of the tissues are insufficient to permit throwing off the disease and the reestablishment of health. Both conditions are usually present. Quinine arsenate may be administered in single doses of one centigram before each meal, or in the smaller doses of one milligram every two hours while awake.

*Strychnine arsenate* is a good selection in all those cases in which the vitality is evidently deficient or the vascular tension below par. When vascular tension is relaxed, when the tension of any of the bodily tissues is relaxed, strychnine is indicated. It is also of some value in the way of increasing the sensibility of the affected tissues, and

this is especially likely to be the case with very aged persons. In this respect there are other remedies that are more effective, but this power of strychnine is by no means trifling.

It is a custom, which often is to be commended although not always wise, to administer these three arsenates together, by themselves or in combination with *nuclein*. The latter is especially indicated when there is more than usual reason for stimulating leucocytosis, as for instance in those cases where there is a well-founded dread lest tubercular infection may be ingrafted upon the original catarrhal malady. If strychnine arsenate is administered alone or in combination, every two hours during the day, half a milligram at each dose is enough. But if administered three times daily, before meals, 2 milligrams may be given at each dose.

#### *The Use of the Sulphides*

*Arsenic sulphide* is a very valuable preparation. Through its acid it acts as a general toxic agent against all forms of invading bacteria. The sulphide also checks secretion, hence the presence of profuse sputa, swarming with various microorganisms, is the indication for arsenic sulphide. Of this one milligram may be given from three to seven times a day.

If fragility of the tissues is marked, or if the invading microorganisms are especially virulent or profuse, as found in the sputa, *calcium sulphide* may be administered, alone or with arsenic sulphide. Calcium sulphide is always better given in small, frequent doses. One centigram every one or two hours during the day is a suitable dose for either adults or children. If this is administered for two or more days, until the perspiration commences to exhale the odor of sulphureted hydrogen, the condition known as saturation has been produced. It is claimed by those most enthusiastic over the sulphides that no microorganisms will persist in the human body when thus saturated with the sulphides. Whether this be true or not, the writer has satisfied himself by abundant experience that this saturation is harmless. Lime (calcium) is the one element which imparts firmness

and stiffness to the cell-wall; hence in all hemorrhagic cases, and where there is rapid destruction of tissue going on, it is indicated. If the sulphides are required, calcium sulphide may be employed, and this may be given up to half a gram a day.

If the sulphides are not indicated, however, the *lactophosphate of calcium* is a very excellent preparation, somewhat slow in action but quite effective. This is the most soluble salt of calcium known; therefore most likely to be absorbed and assimilated.

If, however, the alimentary canal needs disinfection, a most valuable agent is *calcium sulphocarbolate*. Of this 3 to 4 decigrams may be given from four to seven times a day. This is especially indicated if the stools are offensive. Abundant experience has shown that it is not enough to empty the bowels, without the addition of this disinfectant.

#### *Remedies Modifying Bronchial Secretion*

*Lobelin* has a double action. It increases mucous secretion and hence is of value in cases where there is little secretion, the mucous membrane being dry. This is especially liable to be associated with a nervous irritable cough, and this nervous condition is also relieved by lobelin. To an adult, from one milligram to one centigram may be administered, best every hour, until the supervision of slight nausea or general relaxation shows that the full desirable effect has been obtained and even a little exceeded. When the quantity of the remedy necessary to produce this condition has been ascertained, a slightly smaller dose may then be administered each twenty-four hours, the doses being rearranged to suit the patient's condition.

A group of remedies may be associated here, as possessing the common property of increasing the sensibility of the mucous membrane. In very old and very young persons the sensibility is prone to be so deficient that secretion collects without the patient's knowledge, and the attendant and the physician may only be warned of impending danger by the supervention of a dusky hue, rather than a decided cyanosis.

This, with lessened general sensibility, gradually deepening into somnolence and this into stupor, indicate the supervention of carbonic-acid poisoning. For this condition the best remedy is *sanguinarine*, which may be administered to adults in doses of 1 to 4 milligrams and repeated every hour. The effect of this remedy is to increase the sensibility of the mucosa, so that the patient is aroused to the necessity of coughing; in fact it makes the patient cough harder. It is one of the most valuable remedies at our disposal. It has seemed to the writer that in effecting this action it increases the vitality of the mucous membrane, and hence aids in the effort to cast off the disease. *Senegin*, *aristolochin*, *ampelopsin*, *chelerythrin* and the *ammonium* salts resemble *sanguinarine* in this respect, but the last I believe to be the best of the group.

#### *Antispasmodics and Vascular Control*

The spasmodic elements are combated also by *cicutine hydrobromide*—a very valuable agent. When the patient is coughing too much, and there is a spasmodic element present, dyspnea being marked, a milligram of this remedy should be administered every one to three hours until relief ensues. As a side issue, *cicutine* is especially valuable when there is a disposition to melancholy and nervous apprehension, or even a dread on the patient's part of impending insanity. Just why *cicutine* should relieve the conditions underlying this mental state I do not know.

*Hydrastine* is a remedy for loose catarrhs. It may be administered in doses of 2 milligrams repeated every hour. It is a slowly acting remedy, but its effects are remarkably persistent when once induced.

A closely allied remedy in the same class, *berberine*, has a distinct action. The effect of *hydrastine* is largely exerted upon the walls of the blood-vessels, hence it is especially a remedy for hemorrhages. *Berberine* on the other hand has the specific power of contracting relaxed connective tissues, and is useful in the relaxed state which generally accompanies that local low vitality for which we suggested *sanguinarine*. It is therefore

a good companion to the latter. Whereas the effects of *sanguinarine* are produced in a few hours, those of *berberine* require days or weeks for their production. It is a good remedy to give continuously, for one to six months, not expecting a very quick action. For this reason it is best given in three or four doses daily, and not in small doses every hour. Perhaps one grain of *berberine* four times a day represents the average desirable dose for adults.

#### *To Control Excessive Expectoration*

Another group of remedies—enumerated further on—is of value when the patient is expectorating large quantities of profuse, thin secretion, and it is desirable to dry this up. These profuse secretions may be due to either one of two conditions:

On the one hand the profuse expectoration is due to a bronchopulmonary mycosis, and here we have effective remedies in the *aromatic group*, including the oleoresin of cubeb, benzoic acid, eucalyptol, menthol, thymol, myrtol, creosote, and above all in point of efficiency, *copaiba*. The latter is the most powerful and the most quickly acting of all these remedies. Unfortunately its action does not always bring relief, for by the administration of full physiologic doses we may completely stop all secretion from the respiratory tract, leaving the mucous membrane dry and tense, and so the patient will be most uncomfortable until secretion is restored. *Atropine* promptly stops the secretion for the time of its action, and although the dryness of the mouth and throat attending it are annoying, nevertheless the effects are less unpleasant than those of *copaiba*.

Perhaps *benzoic acid*, while slower, is less objectionable than the others named. It is at any rate a good remedy, and may be given in doses of one centigram every half hour while the patient is awake.

Tannin has also been advised, but when taken by the stomach it is more than doubtful whether this remedy has any effect whatsoever upon the respiratory mucosa; *berberine* does much better, although it is slow. The mycosis may also be combated by

astringent antiseptic sprays. Euarol used with an oil atomizer three or four times a day is a very effective remedy.

On the other hand the mucous secretion may be colliquative and alternating with diarrhea and sweating of the same nature, a condition indicative of that profound vital depression which betokens the speedy approach of death. As a tonic remedy here *calcium lactophosphate*, in doses of one Gram daily to adults, is excellent. In all such cases the prognosis is gloomy, and all we can expect to do is to delay the swift approach of death. However, the writer has succeeded in keeping a tubercular patient alive for full two years after the development of edema and colliquative sweating, so that there is hope even for these cases.

#### *Colchicine: A Valuable Eliminant*

*Colchicine* is a useful eliminant in gouty or plethoric cases. It takes about twelve to fourteen hours before its effect as a cathartic is manifested, and it is usually desirable to produce this effect. From one-half to 2 milligrams may be administered on going to bed, and the cathartic action will be in evidence some time during the following forenoon. This may be repeated with advantage for three nights of each week in the cases mentioned.

#### *The Iodine-Containing Remedies*

Another class of remedies are those containing *iodine combined*, such as ammonium iodide, iodoform, iodol, iron iodide. Add to these arsenic iodide, the most promptly effective of all. Their functions are best utilized in those scrofulous cases in which the perivascular lymph-spaces are blocked up, the circulation outside of the blood-vessels is poor, and the bodily forces are unable to dispose of the *debris* resulting from the inflammation. It is necessary to stimulate the absorbents here, and the iodides do this. They are markedly of value in cases that resist treatment and tend to become chronic. This is an exceedingly dangerous condition, as it is especially liable to result in tuberculosis, the tubercle bacilli finding opportunities for invading the tissues, while the

leucocytes are unable to penetrate through the lymph-spaces and cope with them. *Arsenic iodide*, one milligram before meals and on going to bed, is one of the most powerful absorbents I have ever met.

If there is that fragility of the tissues which results in cellular disintegration, or in hemorrhage, *iodized lime* is effective. It is also of use to meet the constantly recurring subacute attacks, which if taken in the very beginning can usually be dissipated by a few doses of this remedy—2 centigrams in a tablespoonful of hot water, repeated every fifteen minutes for seven doses. These small, frequently repeated doses are always preferable with this remedy.

If anemia is present and the effect of iron is desirable, *iron iodide* is a useful remedy. We have here a very curious union of two remedies antagonistic over a portion of their field, each of which, however, performs its function without interfering with the other. Hence we may have an improvement in the condition of the blood, an increase in the number of red corpuscles and in the percentage of hemoglobin, due to the iron, while at the same time the abnormal tissues are being broken down and carried off through the influence of the iodine.

*Iodoform* is useful in fulfilling the functions of iodine, and also, being in part excreted through the respiratory mucosa, it exerts there its soothing influence upon the cough. It is useful therefore in any case where the cough is irritating, and is repeated more frequently than is desirable. I must doubt if there is any appreciable antiseptic action exerted by iodoform in its passage through the respiratory mucosa. It is not best to rely upon this agent for this purpose.

#### *To Allay the Cough*

We have still another group of remedies, whose function is to allay the cough and permit the patient to have a due amount of sleep. These should not be given when oxidation is deficient; but when the cough is excessive in proportion to its actual requirements for the purpose of raising and ejecting secretion, we may call upon these. Morphine, codeine, cicutine hydrobromide, cam-



phor monobromide, zinc cyanide and cannabis indica comprise this group.

*Zinc cyanide*, when given with judgment, is the least objectionable of these. Its effect in sedating the irritated respiratory mucosa is very great. It is at once the most uniform and the least liable to decomposition, and consequent irregularity of action, of any of the preparations of hydrocyanic acid. The dose for an ordinary adult is one centigram, repeated every one to four hours. Cardiac depression would of course constitute a contraindication, and the patient must be carefully warned not to take the remedy in too large doses, too frequently, or at times when depression may be manifested.

Of this group, next to zinc cyanide, the *bromides* of *cicuttine* and of *camphor* are advisable, and if these will fill the needs the others should not be employed. Of the opiates *codeine* is the most effective in relieving cough and the least objectionable, that is, it is less liable to cause an opiate habit, while it more directly relieves respiratory irritation and interferes less with digestion. Nevertheless, codeine is capable of inducing a habit, and hence should not be employed where other remedies of this group are indicated. If used, it is best given in very small doses. The writer has frequently found excellent results follow the administration of granules containing one milligram each; of these one granule is allowed to dissolve upon the tongue, and repeated every five minutes until relief ensues. Two or three of these granules usually suffice to give relief. Those accustomed to administering codeine only in bulky doses, from 1-8 to 1-4 grain, would scarcely believe that the minute doses recommended here would give as much relief as they do; but it is a fact, nevertheless.

#### *When Heart Tonics Are Needed*

*Scillitin* is a remedy which, as an expectorant, closely resembles sanguinarine. It is also a powerful heart-tonic and especially effective as a contractor of vascular tension. It resembles in this respect digitoxin and apocynin, and hence should not be employed when contraction of the arterial system

would throw more work upon a laboring heart. When, however, dropsy is present, and it is desirable to increase vascular tension, small doses of scillitin may be employed with advantage; a milligram three or four times a day usually suffices.

*Physostigmine* is especially valuable when gastric or intestinal flatulence increases the discomfort of the patient, arousing dyspnea and making him cough more than is desirable. Physostigmine is a specific remedy for this condition, and in doses of half to one milligram, repeated not more than once in four hours—preferably not oftener than once in eight hours—is a valuable adjuvant.

In late cases, when general dropsy is present, *digitalin* may be employed with advantage. As a rule, however, *apocynin* is a better remedy here, where its vascular tonic action is not objectionable but rather desirable. Apocynin may be given in doses of half a centigram every four hours. If digitalin is employed, it is perhaps best given in doses of one milligram every two hours; but this may be increased, as Beates has shown it to be a safe remedy in doses up to one-fourth of a grain or even up to one grain.

Few physicians are aware that *cerium oxalate* has decided power in controlling dyspnea and various forms of nervous cough. A fair dose of the chemically pure oxalate is one grain, to be given two or three times a day.

#### *Tonics to the Mucosa*

Three remedies have been advised as having each a specific effect as tonics, and as restoring healthy conditions to the mucous membrane. These are *collinsonin*, *helenin*, and *arbutin*. *Hydrangin* might be added to these, although but little is known about it. Helenin and arbutin are glucosides, the former representing elecampane, a remedy whose popularity with the laity never ceases. Of this one or 2 milligrams may be administered every two hours. Arbutin may be given in similar doses. Both of these are slowly acting remedies, but they undoubtedly increase the vitality of the mucous membrane and aid in establishing healthy conditions. Their tendency is rather to check secretion

than to encourage it, hence they are better suited to cases where there is profuse secretion than to dry catarrhs, in which lobelin is of such value.

The indications in chronic bronchitis, so far as the symptoms are concerned, may be arranged under the following heads: We wish either to increase or diminish the irritability of the sensory nerves, to increase or diminish the mucous secretion, to combat mycosis, to promote recovery. If these conditions are kept firmly in mind, we shall not make the far-too-common mistake of commingling remedies with diametrically opposite actions. For while antagonistic remedies may be administered together, with benefit, when we have antagonistic conditions, in separate parts of the body (as for instance when we have vascular contraction with anemia in one part and vascular relaxation with hyperemia in another), yet we cannot possibly imagine a case in which we want to increase and to diminish the respiratory mucous secretion at the same time, or to make the patient cough harder and cough less at one and the same time. Unfortunately this is exactly what is done in the vast majority of the prescriptions huddled aimlessly together by physicians who fail to distinguish between the various properties of the remedies known collectively as expectorants.

#### *Apomorphine and Emetine*

Two other remedies are of exceeding value, when it is desirable simultaneously to allay bronchial irritation and increase bronchial secretion. These are emetine and apomorphine. *Apomorphine* is probably the most powerful stimulant of respiratory secretion we can give. It may be given by the mouth, in doses of one-tenth of a grain, or up to one-fourth grain, with perfect con-

fidence that neither emesis nor even nausea will be induced. Instead of this it powerfully increases the secretion of the respiratory tract. I have tried this remedy in the earlier stages of bronchial catarrh, and have found that although secretion may be increased, the course of the disease is neither thereby hastened nor shortened. So that apomorphine should be looked upon simply as a symptomatic remedy, to be administered when the secretion is deficient at that particular period of the disease when it ought to become profuse.

With *emetine* it is somewhat different. This also increases the secretion, but less markedly, and always, I believe, with the supervention of some nausea. But the course of the disease is markedly modified and shortened by emetine. It is therefore preferable when administered with this object in view.

Calcium iodized is only useful to break up a forming catarrh at the very beginning. If the disease process has been suffered to progress beyond the initial stage, we get simply the effect of the iodine, but not in the way of breaking up the attack. Emetine does not jugulate the malady, but shortens it. Besides this, it aids materially in keeping the digestive system in good order. In chronic bronchitis it is a remedy for specific use in the subacute intercurrent attacks, rather than one for the ordinary forms of the disease, unless mucous secretion is scanty and it is desired to increase it. Of the pure alkaloid emetine, one milligram may be given to an adult, repeated every half-hour to two hours, stopping when the slightest nausea is manifested.

The bowels must be kept well open every day, by a morning saline laxative, aided, if needful, by an evening dose of podophylotoxin.



# FORM A MEDICAL PARTNERSHIP

This article, which is reprinted, in part, from "The Wisconsin Medical Recorder", for February, unfolds some of the details of a truly great plan, which may result in helping us to the solution of a great economic problem

By GORDON G. BURDICK, M. D., Chicago, Illinois  
Professor of Radiotherapy in the Illinois School of Electro-Therapeutics

THE reluctance of physicians to join each other in a business organization in order to increase their efficiency to their patients, make their work easy, and increase their general usefulness in their community, has been remarkable. The natural ingrained suspicion of each other, acquired after listening to years of idle gossip among their patients, is in a great measure responsible for these conditions.

If we stop to think we can realize that there is only a certain amount of work to be done in each community, and that it must necessarily be divided up among the many. It is true that one may have more work than his competitors, but this is true in all lines of effort. If we consider the matter from an economical standpoint, we just begin to realize what it means for physicians to work independent of each other.

For illustration, let us take a town with six physicians doing all the work, and we ordinarily find them maintaining six different offices, at a certain sum per month. If we go into any of their offices we shall find there very poor equipment for practical work but in the aggregate representing a great outlay. Now suppose some power should compel these physicians to unite; what would happen? They could, by their combined capital, rent one of the finest buildings in town, fit it out with laboratories, dressing and surgical rooms, could install equipment for special work in the eye, ear, nose, throat and electrotherapeutics.

They could hire attendants, bookkeepers, etc., and still save money on their original investment. Each physician could equip himself for some special laboratory work and so, by forming an efficient operating team they would remove the most serious reproach

against the general practitioner, that of carelessness in diagnosis.

## *Form a Stock Company*

To properly organize these concerns, a stock company should be formed for a nominal sum, and each individual take say \$500.00 worth of stock, it being the understanding that the stock shall draw only a small, limited dividend. After all the debts of the common concern are paid, the surplus is to be divided among the partners, according to the actual value to the firm of each individual during a certain term. That is, each member is to be paid a certain percentage of the business, based upon the actual cash business he has brought into the firm during this period.

It is evident that under this system no injustice is done to the popular ambitious man, and the drone or lazy man will get just what he earns and no more. Every member of the firm should be a family practitioner, as well as a specialist in some line of effort, and in order that no injustice be done it should be understood that if, for instance, the eye-man finds a case of appendicitis, which he turns over to the surgeon for operation, fifty percent of the fee shall be charged to the account of the eye-man and the rest to the surgeon. In this way the eye-man is compensated for his diligence in making a diagnosis and bringing the case into the firm, and the surgeon is compensated for his actual work.

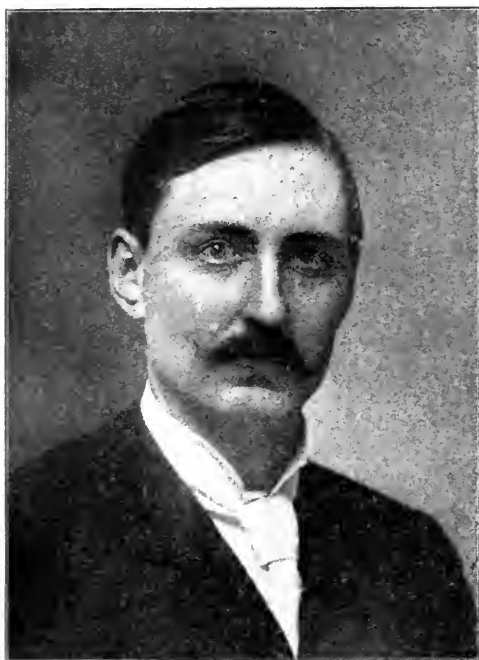
Patients should be allowed to choose any member of the firm they wish to attend them, and, if necessary, other members of the firm should be willing and ready to consult with the attending physician, without compensation, it being presumed that the efforts would

about offset each other in the course of a year, and it would be a great drawing card to the average patient to know he can get the services of six physicians, if necessary, for the price of the services of one.

For night work each physician should take turns to go on duty, so as to preserve the health of each member and prevent the soul-destroying work of being up night after night.

#### *The Firm's Laboratories*

The laboratories should be under the supervision of one member of the firm, and if



DR. GORDON G. BURDICK

practicable, the actually laborious work should be done by a student, as far as possible, as the average student can soon be trained to do this work with precision.

Provision should be made to give each physician a vacation of one month, each year, to be taken either at one time or in periods of a week or more. If the member desires to go away for study, his tuition should be paid by the firm out of the general receipts. While on his vacation, he shall draw from

the general receipts the same amount as he was paid the previous month instead of the percentage share. This is done to encourage vacations, and especially study, this making each member so much more valuable to the concern.

The firm should have a press agent to give out timely hints upon the public health, giving warning upon the general increase of contagious diseases in each community; giving information that will prevent the farther spread of disease by asking the people to follow the golden rule (the old version, not the new); cultures should be made of water, milk, etc., several times a week, and the proper authorities warned of infection or when dangerous preservatives are used. Sanitary inspection should be made and all violation reported for correction.

Monographs in simple, plain language should be given to the public press from time to time, as the season may warrant, giving minute directions on how to avoid certain diseases and prevent their spread. These, if possible, should be conservative, telling all that is actually known regarding the disease in question and pointing out the fallacy of popular beliefs.

There is no one thing that will raise the medical profession so quickly in popular estimation as telling the actual naked truth. There is nothing that will disarm the quack, both out of and in the profession, so quickly as accurate knowledge concerning medicine.

#### *Every Firm Should Have its Own Specialists*

Let each member of the firm study some specialty outside of medicine that has a bearing upon our complex civilization and give accurate knowledge upon this subject through the public press. In the matter of publicity, union of physicians will solve this problem satisfactorily.

Yet another question of sociologic importance should be considered: the support of the home paper, the organ through which you can accomplish much good. It is no more than fair that it should receive your support. The printer must live and if he does not receive support from his townspeople he must reach out and take adver-

tisements from other people who are willing to take a chance on getting their money back.

I am under the impression that it would pay the firm to take a small space, giving names of their members, with their equipment and laboratories, and pay a big price for this space, enough in fact to make it worth while for the printer to refuse all patent-medicine advertisements. Or if this is not the best plan in your particular community, pay for space for your articles upon various public topics, with the direct understanding that objectionable advertisements are to be left out. The public press is the greatest factor for good or evil that we have in our civilization today, and I am much inclined to believe that newspapers represent fairly the intelligence of their environment. If the editor can not live from the support of the good people he must cater to the evil to do so.

In this age and stage of the game we are all just as honest and law-abiding as our environment will let us be, and none of us are what we should be or would like to be. But the ever-present specter of "making a living" influences many of our actions, and not always for the best interests of ourselves or the community; so that the support of the home paper by the good people of each community is of prime importance and it should be the business of each community to hold the paper strictly to account for any dishonest tendencies. . . .

A specially trained pharmacist must be included in the firm, as he will have no incentive to be dishonest with his employers. His judgment can be depended upon to secure to the firm a fine class of drugs, and in this way one of the most serious drawbacks of our profession may be avoided.

#### *The Influence in the Community*

I have had the privilege of investigating many of these medical firms in different cities and without exception they are the important factor in each community in which they have their being. The rest of the medical fraternity regulate their own conduct by the example set by the firm, and

in each place investigated I found that the best practice was invariably owned and controlled by the organization, and that the members of these firms were highly respected by their competitors and called frequently in consultation when required.

If a physician who is enlightened and desires to form an organization of this kind cannot persuade his competitors to join him in an undertaking of this kind, he is justified in advertising for more progressive physicians to come into his community and form the organization, and he will find that he will win out, in spite of the opposition of his associates in the same town. Progress should not wait for the pig-headed individual; if he won't learn, use a club and make him get out of the path. He will learn quickly enough when he sees his living going to organized medicine, and when it is too late to save him from the consequences of his own folly.

#### *Dishonesty and How to Handle It*

The fear of getting a dishonest member in the firm has deterred many physicians from undertaking a united business arrangement and I have spent some time in investigating this individual and devising ways and means to thwart his efforts as a trouble maker. One Nebraska firm had the misfortune to incorporate a brilliant but incorrigible rascal of this type who by his puerile dishonest tricks kept several members of the firm in hot water all the time. This fellow had a poor financial memory and would collect money and fail to report it, but when caught with the goods on him would plead forgetfulness and promise better conduct in the future.

To circumvent this tricky individual a special system was devised; all calls were received by the office-girl, who wrote them out in duplicate in a special book with a carbon copy. These were turned over to each physician wanted, and had to be turned in each night to be checked off upon the books of the concern, with a notation of the actual work done. Failure to turn them over within twenty-four hours brought a fine of ten dollars for each one unaccounted for.

At the end of each month an itemized bill was sent to each new patient and a statement to any old ones were sent out with instructions to O. K. and return within five days. Failure to do this was followed on the seventh of the month by a visit from the collector. Satisfactory arrangements must be made for payment or the account O. K'd. with the patient's signature. In this way a check was kept upon all accounts and legal evidence of their correctness was at hand at all times.

The period of credit courtesy to be extended to each debtor is determined at full meeting of the members of the firm. If no apparent reason exists for credit, the collector begins on the bills on the seventh and either gets the money or a note signed by husband and wife. This being collected through the bank, the firm avoids the over-worked sympathy dodge.

Two years of this system has made a gentle, well-behaved partner out of our crooked friend and he has apparently not been able to find any system that could beat it, and I don't think he will ever succeed in doing so.

This firm referred to has six members and owns its office building and three horses and buggies. If a rush comes on they hire from the livery while it lasts, and as they are good customers they get special rates. They have the finest-equipped offices in the state, outside of a few run by advertising men, and they dominate medical thought for sixty miles around. They are headquarters for all physicians who visit the town. A fine, large "den" is maintained, well stocked with reading matter, cigars, etc., to cater to the special tastes of their visiting friends; a couch upon which they can rest if tired, and plenty of medical cases to show them if they are interested in these things.

#### *Influence in the Community*

Every member of the firm has some special sociological work on hand. One is the mascot and financial sponsor of the local military company; another promotes and finances a local ball game; one is the "high monkey-monk" of some fraternal organiza-

tion; another is the superintendent of one of the largest Sunday schools, which he has built up through his own efforts; one maintains a hot-house, and through his wife and daughters sick people who are poor are remembered with flowers; another one has a fine touring automobile with a driver, which always seems to appear at the right time to give a cripple or convalescent a delightful ride just as he had commenced to think the world was cold and cheerless and human love a mockery; another member has a magnificent magic lantern and subscribes to an exchange, so he has a new set of slides each month to show to some society, gratis. He has demands upon him many months ahead for this well-appreciated entertainment, and yet in spite of all their outside work they are wonderfully successful. I was shown books of each member before the union and I found that each member had done thirty percent more work before they united, but their income had increased seventy percent after the firm was organized. So successful are they that vacations of two months are now allowed, giving a chance to go to Europe if any member so desires.

How much better and more rational is an organization of this kind where no one is worked to death, where each one has a vacation; where they can buy all the latest books and instruments. They are not crippled financially; very few deadbeats, no evil feeling against their competitors, and every member dear to some portion of the public by his support of some of the better types of recreation and education.

Contrast this with the small, measly little life led by the average physician. No amusements, always financially embarrassed, a victim of every deadbeat, looked down upon with good-natured contempt by the public because he is constantly talking ethics and doing questionable things.

#### *Let us Rid Ourselves of Our Evils*

Is it possible that the full-born American physician will ever come out of his trance and realize his position before the public. It is getting to be almost impossible to pick up a newspaper and not find a fling at the

doctor, and it doesn't take much investigating to find out that he deserves it.

Competition, jealousy, the growing business of making paupers by our alleged leaders are all slowly but surely cutting into the income of the family physician, and if our leaders can have their way, the future will find enormous institutions built for special purposes with one of their number as head professor, while the American people will be outside standing in line like a lot of tramps, waiting their turn at the coffee wagon, willing to let this alleged great man work his sweet will upon them. . . .

Can these things be stopped, is the question I am daily asked. Yes! But only by the united efforts of the general practitioners. If these physicians would stop calling them in consultation, and tell them why they do so, much will be accomplished; still even this will not correct the matter so as to prevent some other medical man with philanthropic hallucinations from springing more schemes from time to time. Only by a thorough business organization with a common medium of communication, and supported financially in such a manner as to allow thorough investigation of the subject, will an effective stop be put to these insidious attempts to undermine the family physician. . . . We must support or fight all laws as they may be for or against the interests of our profession. We must investigate the charity evil, and find and apply remedies for the various cancers that are

eating the heart of our profession; and discipline by publicity our false leaders, and teach them to avoid carefully the business of making more medical paupers with the same fear a person gets after picking up a live wire.

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[This remarkable article is one of a series which is appearing in *The Wisconsin Medical Recorder*, all of which are well worth reading. We make no apology for republishing it here. The problem which Dr. Burdick discusses is one of the greatest importance to the general practitioner—that of self-preservation. What shall we do to withstand the encroachments of "specialism," the multiplication of medical charities—the free dispensary, charity and monopolized hospitals, contract practice? How shall we meet the competition of the counter-prescribing druggist, the patent-medicine promoter, the fads and follies of "healing," as mental and faith healing, "nature cures," osteopathy and Christian science? How can we best meet the real *needs* of our patients so that we may not need to fear competition, at home and abroad, thus deserving the confidence that we seek? These are questions that the "leaders" of our profession apparently have not sought to answer. They are *business* as well as social questions, yet of vital interest to all of us. What do you think of Dr. Burdick's plan? Can you suggest a better one? Let us hear from the "family."]—ED.

## TREATMENT OF CEREBROSPINAL MENINGITIS

How a rational method of treating this disease was sought, and with what results. The report of three interesting cases treated by the author

By EDWARD A. TRACY, M. D., Boston, Massachusetts  
Orthopedic Surgeon to Mount Sinai Hospital

LAST spring Boston was visited by a severe epidemic of cerebrospinal meningitis, at least it was severe on the children of the locality in which the following case occurred. The district nurse

informed the mother of the first patient whose case I reported that she had seen ten children die from cerebrospinal meningitis in the immediate locality, and that Eddie Mullen, my little patient, was the only one of those

suffering with this disease that she had seen get well.

The treatment generally given for this disease in Boston differs none at all from that given in other medical centers, it being based on the therapeutic nihilism taught by Osler and practised to its limit by Mrs. Eddy, etc. Osler's followers give some bromides, and that is about the only difference between their treatment and that of Christian science. As a result the innocents were slaughtered in the above epidemic.

#### *A Rational Method of Treatment Sought*

The treatment used by me in the cases reported suggested itself as being rational; the use of the remedies being based on their tried efficacy in conditions that were analogous. The success of the treatment warrants its thorough trial should the occasion again present itself—which is probable, as these epidemics are not rare. The remedies employed, it will be noticed, were used boldly for effect. They were also of prime quality—from makers of acknowledged honesty.

Case 1. I was called to see Eddy Mullen May 16 last. Two physicians had seen him the night before and gave a diagnosis of cerebrospinal meningitis. There was head retraction and complete unconsciousness. I injected a hypodermic-syringeful of Lloyd's ergot into the arm and left some to be given in half-teaspoonful doses every three hours. After the third dose was given—at about 4 a. m., May 17—the little fellow became conscious for twenty minutes, then lapsed into unconsciousness for a period of three days. This period of consciousness coming on after giving the ergot gave the parents great hope in the medication and I have never seen medicine administered with greater faithfulness nor more intelligence by a trained nurse than this faithful ordinary Irish mother gave the medicine to her child, and she had a family to look after besides.

My object in giving the ergot was to lessen the congestion in the meninges and brain and thus possibly restrict the spread of the causative cocci. That it was effective in lessening the congestion I think the return of consciousness as noted proves.

Calomel (gr. 1-6) and podophyllin (gr. 1-6), one granule of each every half hour till six of each were taken, were given, for the bowels. Calcium sulphide, two 1-6-grain granules every hour (this because of its known action in knocking out the staphylococcus), was used with the hope that it might prove powerful against the intracellularis coccus, a probable relative of the staphylococcus. Echinacea, a 1-2-grain tablet, was given every two hours. Echinacea was given because of its proven efficacy in septic conditions, also because our eclectic friends claim it to be of use in this disease—and I—a Harvard graduate in medicine—doff my hat to the eclectics for their practical knowledge of efficient remedies, based on clinical observation. Dosimetric trinity No. 1 was given every three hours for fever.

On the fourth day temperature was 102°F., pulse 104°. Aconitine was now given for fever—gr. 1-134 every two hours till fever subsided. A pellet of gelsemin, gr. 1-134, was given at night every half hour till the child slept. For the bowels sal hepatica was given—about one teaspoonful in water.

#### *The Result of This Treatment*

On the fifth day the temperature was 101°F., pulse 84. The stiffness of the neck had considerably diminished. My notes show that on this day he was taking echinacea (as before specified), aconitine, grain 1-134, and strychnine arsenate, gr. 1-134, one of each every two hours; calcium sulphide, gr. 1-6, two every hour; sal hepatica for the bowels; and for sleep at night one each of cicutine hydrobromide, gr. 1-67, gelsemin, gr. 1-134, and hyoscine hydrobromide, gr. 1-1000, until effect.

A few days after he was on the high road to recovery. All the stiffness of the neck was gone, appetite was good, and medicine was no longer indicated. The child today is a sturdy little chap with nothing to show for his severe tussle with the dread disease that was so deadly in his neighborhood.

You may think aconitine, strychnine, cicutine and gelsemin are powerful remedies to be administered by any hand other than that of the doctor or the trained nurse.



But in this case, what the remedies were given for was explained to the mother, who gave the pellets as long as the indications called for them, stopping them when they produced the effect desired, and then giving them again when the indications reappeared.

Case 2. On June 8 I was called to see Baby Burke, aged 18 months. The child had been under treatment by the dispensary district physician for a week for cerebrospinal meningitis, the treatment being sodium bromide in solution. The baby had fever, marked protrusion of the anterior fontanel, and had retraction of the head due to rigid neck muscles. The child also had a cough since being bathed in too cool an atmosphere the day before. I gave calomel for the bowels; aconitine (gr. 1-134 in twenty teaspoonfuls of sweetened water) one teaspoonful every half hour till the fever subsided. On the third day there was a slight diminishing of the anterior fontanel and the baby was a little brighter. Calcium sulphide, gr.

1-6 every hour, was given. Cough was better, pulse 160, temperature 101°F. I should have mentioned that ergot (Lloyd's) in 20-drop doses had been given every three hours for the first three days; echinacea tablets (2 grains) every three hours also. After three weeks of this treatment the anterior fontanel became normal, and all signs of the disease disappeared, the baby making a perfect recovery, though it was much slower than in the first case. It should be remembered that active medicative treatment was not commenced till a week after the onset of the disease.

Case 3. On June 17 last I was called to see Baby Norton, aged three years, who had been sick with cerebrospinal meningitis for twenty days. His cheeks were flushed, he was wasted, eyes were divergent, neck rigid, both blind and deaf. Active treatment was administered as in the above cases, but there was but the slightest response to medication. Potassium iodide was also tried and did no good, whatever.

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## THREE WAYS OF USING CARBOLIC ACID

Its value in the treatment of diphtheria, as an application in minor surgery and to prevent the pitting of smallpox, with a description of the technic to be applied in each condition

By C. S. COPE, M. D., Ionia, Michigan

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MY attention was called to this remedy while I was yet a child, for my father was a physician, and hearing him converse on this topic and being personally acquainted with much of his work, and many of his cases, I came to know the remedy as he used it.

In 1859-60 there came to the hill country of Eastern Ohio, in all the counties bordering the Ohio river, a terrible epidemic of sore throat (then so called) in which oftentimes whole families were swept off, when frequently but one or two would be left out of a large family and those who did live were left crippled by a paralytic action of the disease. This we know now was diphtheria.

The first patient to be attacked in my father's practice was my mother. The attack was severe and the disease made rapid progress. My father did as did all the physicians at that time—cauterized the side of the throat affected with nitrate of silver, but this had no appreciable effect. The patient grew rapidly worse.

My father soon saw that he was confronting something different from anything he had yet seen and that different treatment must be instituted or the patient would not live. On the mantle shelf, just below his medicine cases, sat a dram vial of pure creosote. Mechanically he made a swab of a pine stick and cotton cloth and dipped it into the

creosote and applied it to the throat. The other side had now become affected. By signs—the patient could not talk—the patient made known that the application was a relief. These applications, frequently repeated, and a gargle of creosote in hot water, calomel in large doses, to move the bowels, and large quantities of whisky was the treatment. The patient got well, but it was two years before the soft palate recovered, as the part treated with nitrate of silver sloughed off and deglutition could not be performed unless the nostrils were first closed with thumb and finger.

From this case other cases developed in the family until everyone had it—eight sons and one daughter—but all recovered under the creosote treatment. My father's success in the treatment was phenomenal; so unusual that many physicians came to him to know "how he did it." He told to each his exact method, and to them it was most welcome and proved successful in their hands.

To supplement creosote with carbolic acid was an easy matter, as the results are equally good. For thirty-three years this has been my way of treating diphtheria. I have but one death to report—patient *in extremis* when I was called.

#### *The Technic Depended Upon*

My treatment for diphtheria is as follows: Use a glass rod, dip in pure carbolic acid. Touch all deposits in the throat with the phenol till they change color; repeat often, till you are sure of this. Use a gargle every ten to fifteen minutes, of the following:

Carbolic acid, pure.....dr. 1  
Hot water.....ozs. 32  
Potassium chlorate.....drs. 2

Directions: Use often (every 10 to 15 minutes) as a gargle.

Open the bowels with gr. 1-10 of calomel every 15 minutes until 10 doses are taken. For a tonic and to prevent paralysis give strychnine nitrate, gr. 1-60 every three hours. I have never had need for antitoxin, but am not opposed to it.

In 1879 I began the use of full-strength carbolic acid on fresh wounds as a part of the surgical dressing. Before closing the

wound and after it had been cleansed from all foreign substances I whiten the entire area with pure carbolic acid played upon the wound by an atomizer. Then after the wound is approximated and sutures put in I again touch all exposed edges with the phenol (the skin will turn white at the point of contact). Over this I apply gauze and the bandage, and the work is done. On first application there is pain, but phenol is an analgesic as well, and by coagulating the albumin in the tissues creates an artificial skin, shuts out the action of the air on fresh wounds, and has prepared the way for immediate repair.

After using this method for several years with the most pleasing results, I went before the Union Medical Society of Northern Michigan and read a paper on the use of carbolic acid in wounds, and to my great astonishment was "sat down upon"—was called "a barbarian for applying so severe an agent to living flesh," and altogether I was made to feel that I had no friends for this treatment in that quarter. However I did not give up the treatment but gave it more careful consideration, instead, and as the pleasing results were uniformly satisfactory and there were no exceptions, I kept on.

I was then located in the manufacturing district of the large lumbering and shingle-making enterprises of the lower peninsula of Michigan. Men were coming to me every day, and often many in a day, and they all got the same surgical treatment, varied by the extent of the wound.

In 1889 I went before the Michigan State Medical Society which met that year at Kalamazoo and read a paper upon the use of pure carbolic acid in recent wounds. I had a patient hearing. Some remarks were made—one physician stating that this might be safe in the doctor's (my) hands but he would dislike to trust it to the "boys." In the transactions of the Michigan State Medical Society for 1889 you will find a number of cases cited.

I will not take space with the enumeration of the scores of cases I have treated. Suffice it to say that I have constantly pursued this plan of treatment and the results are as good

today as when I began. At that time we knew nothing of an antidote but now you can limit carbolic-acid action by the use of alcohol. I usually employed an atomizer, but often, when the atomizer would not work, I have poured the acid on the wound from the bottle. If there is such a thing as carbolic-acid poisoning from absorption I have not yet met with it.

#### *Prevention of Smallpox Pitting*

The third and last count in favor of concentrated carbolic acid is in the prevention of pitting in smallpox. This stands second only to vaccination and is worthy of the "Nobel prize." If pure carbolic acid is applied to the smallpox vesicle—while it is in that stage—and then immediately followed by a like

application of alcohol, there will be no pitting. I have used this in my treatment when the patient was saturated with calcium sulphide (Abbott) till he complained of taking rotten eggs—from eructations of sulphureted hydrogen—and yet the vesicles in the hair that we could not reach went on to pustulation while those on the hand and face treated with carbolic acid cleared up and no pits followed.

Now don't be a kicker and sit back on your professional dignity and say, "this is all nonsense," but just try it once, faithfully, and see how it comes out in your hands. I have given to you from out of the abundance of years of experience in the foregoing methods of treatment. Try it and pass it on to the next man. "My little light is none the less by lighting that of my neighbors."

## OPSONIC THEORY AND VACCINE THERAPY

A description of the opsonic theory, the technic of determining the opsonic index, and of the therapeutic and diagnostic uses and possibilities of the opsonins

By ISABEL M. MEADER, M. D., Watertown, New York

**I**MMUNITY, the power to resist or withstand infectious diseases, exists, partly at least, in certain factors in the blood-serum, called opsonins.

These opsonins affect the invading bacteria, chemically, making them "so to speak, more palatable," more easily phagocyted, that is, taken up, engulfed, or ingested by the polynuclear white corpuscles.

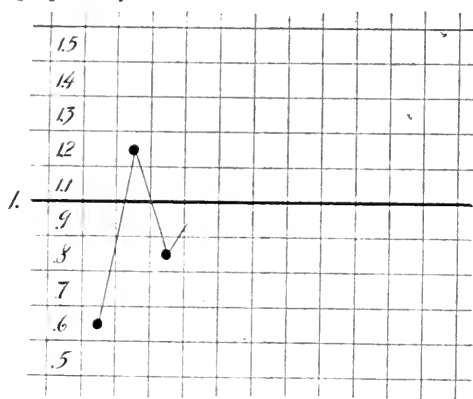
#### *What the Opsonic Index is*

The amount of opsonins in the blood-serum determines one's susceptibility to bacterial invasion, and is different to different bacteria in the same individual. My own blood-serum, for instance, contains enough of the tubercular opsonin to permit of the taking up of only 80 to 85 tubercle bacilli, but enough of the staphylococcal opsonin so that 100 to 120 staphylococci are taken up by 100 white corpuscles. By injecting an infected individual with a dead, sterilized

emulsion of the bacteria causing the disease, the quantity or activity of these opsonins is increased, thus increasing the individual's resistance and producing an artificial immunity. The measure of the exact number of bacteria taken up, or phagocyted, by the white corpuscles is the "phagocytic index."

The result obtained by comparison of the phagocytic index of one infected with that of a normal individual gives the opsonic index. Suppose your blood-serum will cause 100 tubercle bacilli to be "phagocyted" by 100 white corpuscles, while the blood-serum of an incipient tubercular patient will cause the destruction of only 60 tubercle bacilli. The consumptive's tubercular phagocytic index of 60 divided by your phagocytic index of 100 gives *his* opsonic index, 0.6, while yours, being normal, is 1. The consumptive is therefore given an injection of 25-10,000 of a milligram of Koch's new tuberculin. The following day your blood-serum still

phagocytes 100 tubercle bacilli while the consumptives has run up to 120, making his opsonic index above normal, 1.2. The injection has increased his opsonins, given him an artificial immunity. The next day, however, he has dropped down to a phagocytosis of 80, opsonic index, 0.8. We hasten to give him another injection *before* he reaches his previous low mark of 0.6. We chart this graphically thus:



In tuberculosis we hope to run the index to two or three times normal, producing an artificial immunity sufficient to be *curative*.

The whole theory of the opsonic-index part of treatment is to inject for a low index, increasing the dose till a curative artificial immunity results, being careful to inject before the index drops as low as at the previous injection.

#### *"Negative" and "Positive" Phases*

Immediately following the injection we get what is called the "negative phase," a short period during which the patient feels somewhat worse and the temperature may rise. If the temperature becomes very high or the symptoms severe, a smaller injection should be administered next time. This "negative phase" is followed in favorable cases by several days of improvement, called the "positive phase," during which the patient feels better and the opsonic index gradually rises to its maximum and then begins to drop.

Variations in the index have been raised as an objection to the accuracy of the method. There is undoubtedly con-

siderable variation, both *actual* and *unavoidable*, in the blood-serum itself, and many avoidable in laboratory technic. I would ask the objectors to remember that the blood is a vital fluid—tissue or organ, we might almost say—and subject to many variations within *normal* limits, as every tissue and function of the body is. No one questions the accuracy of uranalyses showing different specific gravity or the total absence, or abundant presence, of albumin in the same individual at different times of the same day.

#### *How to Estimate the Opsonic Index*

The white blood-corpuscles act simply as the innocent receptacles or carriers of bacteria. Hence, in getting the opsonic index, or trying to find by comparison outside of the body what is going on inside, anybody's blood will do, but it must first be defibrinated and the opsonins destroyed by centrifugizing it with citrate of sodium. To estimate this opsonic index we take equal parts of:

1. These white blood-corpuscles.
2. The patient's blood-serum (separated by 15 minutes' incubation).
3. An emulsion of the bacteria causing the disease.

These are all three drawn into an opsonizing pipette, incubated 15 to 20 minutes, smeared on a slide, colored, and the exact number of bacteria phagocyted, or found within the bodies of the polynuclear white corpuscles, counted under an immersion-lens.

The comparison of this count with a similar one made at the same time from normal blood gives the opsonic index.

#### *Concerning the Vaccine*

Theoretically the ideal way to obtain vaccine is to prepare it from bacteria isolated in pure cultures from the secretions of the infected individual, as fluid from pleurisy, pus from abscess, urine from suppurative nephritis or blood from a vein in malignant endocarditis. It takes time to isolate bacteria, grow pure cultures, wash them off in sterile salt solution, kill and

sterilize them at 140 degrees for two hours; then standardize the vaccine by smearing, and comparing the bacteria with red blood-corpuscles. If, for instance, we see 500 red corpuscles, we must count all bacteria in all the fields containing them. Should there be 1000 bacteria, then we have 2 bacteria for every red corpuscle. As one cubic millimeter of blood contains 5 million red corpuscles, our vaccine contains 2 times 5 million, or 10 million bacteria. In 1 Cc there would be 100 times this, or 100 million bacteria—a fair initial dose. We estimate and prepare from this the number of cubic centimeters desired.

All this time one cannot always afford to give, and often it is not possible to isolate the bacteria. Hence vaccine already on hand or obtainable from reliable firms may be used. It is almost the universal custom in tuberculosis to use Koch's new tuberculin, though Dr. Trudeau of Saranac is experimenting with vaccine prepared from bacilli isolated from the patient's sputa.

In staphylococci infections (such as acne, boils, abscess), stock, or standard, staphylococcus vaccine has been very generally used.

#### *The use of Opsonins Therapeutically*

While working under Dr. Floyd at Harvard I saw 60 patients under opsonic treatment. No patient with high temperature, active hemorrhage or large cavities was injected. They all received, as far as possible, outdoor life, forced feeding and frequent bathing, with disappearing symptoms. My own experience is limited to six months and includes 9 cases. Two of these were in an advanced stage and promptly died, one after three injections in a week's time, the other in a month, after 7 injections. No appreciable difference in condition resulted from the injections, being further proof that advanced pulmonary tuberculosis does not yield to tuberculin. One case, septicemia with multiple abscesses, for which vaccine was made from pus isolated from one of the abscesses, received several injections, with no apparent benefit. Patient became discouraged and left the hospital.

To offset these three cases, three others have given apparently almost brilliant results, while three are still doubtful as to the outcome. Of the three cases apparently cured two have special points of interest: both have received injections for about six months.

The first, a young man of 18, improved very rapidly. Starting with cough, T. B. in sputa, night-sweats, and opsonic index, 0.8, in six weeks he had run the index to 1.8, had gained eight pounds, with disappearance of all symptoms. At this point he contracted mumps and was sick three weeks. When he returned, his index had dropped back to 0.8 and he had lost five of the eight pounds gained, his cough and night-sweats returned. They disappeared again after two injections. He was discharged December 26, cured, his index remaining at 1.2. He called to see me on Tuesday, reporting himself perfectly well.

The other case is entirely different, being a child of 10, with enlarged glands and a tumor in the right breast about the size of a butternut. This child had typhoid about two years ago. At beginning treatment she was running about 1-2 degrees of temperature. Now after 16 injections she has gained ten pounds, temperature remains permanent at 98°F., the enlarged glands almost entirely gone, and the tumor reduced fully two-thirds in size. This case brings forward one of the greatest fields of future possibilities—the saving of the unfortunate children of tubercular parents.

Dr. Floyd has examined several hundred of these children, and nearly all show a low opsonic index. Many of them have received injections, with marked improvement. Dr. Greenbaum, of Germany, gave his little daughter tuberculin every two weeks for a year, and now reports her perfectly cured, with total disappearance of enlarged glands, struma and cachexia.

Workers everywhere report favorable results from injections in glandular cases.

#### *Concerning Injections Against Typhoid*

The British army, in August, 1905, vaccinated 150 men of a single regiment against

typhoid fever, giving two injections of typhoid bacilli at ten-day intervals. In September the regiment reached India. Within a month or so 63 cases of typhoid occurred, none of which were in the 150 men vaccinated, except two, and both of these had refused to take the second injection. In Paris, during the past six years, Chantemesse vaccinated 1000 typhoid patients, with a death-rate of 4.3 percent, while during the same time 5000 unvaccinated typhoids showed a death rate of 17 percent.

Injections of streptococci have been given to control asthma, with some brilliant results, but also I believe two deaths have occurred within fifteen minutes of the injection.

Prophylaxis is already realized at one Children's Hospital in Boston, so far as diphtheria is concerned. Every child entering receives a prophylactic dose of antitoxin, regardless of the disease from which he suffers. This has been done for over a year. Previous to this from 11 to 18 percent of all children entering with other disease also contracted diphtheria. Since the use of the prophylactic antitoxin, I believe not a single case has occurred in the hospital.

The cases benefited by injections are the early cases of tuberculosis—the *very* early ones, while in other instances it is the more chronic cases, as suppurating sinuses, chronic middle-ear suppurations, gonorrheal arthritis, chronic pyelitis, pleurisy with effusion, peritonitis with effusion.

In surgery, as a preventive of suppurations, those who show a low opsonic index are often given a prophylactic injection of staphylococci the day before an operation.

As yet few acute cases have been benefited by injections, though some favorable results concerning malignant endocarditis and septicemia are reported.

#### *Diagnostic Value of Tuberculin—an Opsonin*

Many experimenters are now investigating the value of tuberculin in the early diagnosis of tuberculosis. The methods have ardent supporters and bitter assailants, as has the opsonic index. Four distinctly different methods are employed.

First and oldest: Injection of tuberculin in sufficient dose to cause reaction. The method is valuable but accompanied by considerable risk.

Second: The heated-serum opsonic index. If blood-serum from a normal individual is heated to 66°C, bacteria refuse to phagocyte when mixed with it, while serum from an incipient tubercular case, if heated, will still cause "phagocytosis." [The author evidently means to use this word, not in its ordinary sense, but to express the increased power of the phagocytes to engulf or destroy the bacteria.—ED.] In the one case in which I have tried this, my own heated blood-serum gave *no* "phagocytosis," while the suspected individual's gave a decided "phagocytosis." We still, however, wait further proof before injecting this case.

The third method—the ophthalmic—offers much encouragement. The simple dropping of tuberculin in the eye causes reaction if tuberculosis is present. This has proven more efficient in children than in adults.

Fourth method: Skin scarification, as in the prevailing method of vaccinating against smallpox. This has given promising results in diagnosing early tuberculosis.

It certainly *is* indisputable that the opsonic index *has* an established diagnostic value, determining both the amount of dose and time for reinjection.

That it is *necessary* is not so certain, but like other laboratory aids it is a help in diagnosis and treatment. After the bacteria present are known, the first few indices taken, and the individual's average response obtained, the continued treatment may not *need* the index, but I should compare its continuance in value to that of cases of Bright's disease or diabetes. They *can* be treated without uranalyses after the diagnosis is made, but who questions that more accurate and scientific work can be done with repeated analyses. The opsonic index, as now used, with its time-consuming difficult laboratory technic, requiring severe skilled bacteriologists to treat the cases in a single hospital, it is too impracticable and too expensive ever to become general.

The opsonic index has three uses, namely, (1) diagnosis; (2) treatment; (3) prophylaxis.

Of these three the greatest is yet to be prophylaxis.

In conclusion, I predict that growing out of the present and future use of the opsonic-index and bacterial therapy there will surely

be evolved such facts—opsonic, bacteriologic and clinical—as to put into the hands of every practising physician reliable vaccines by which he can not only control and inhibit but by prophylactic use *prevent* the action of pathogenic bacteria and accompanying infectious diseases.

## PAT HOGAN'S 'PENDISATIS

Not particularly instructive, but decidedly amusing; and we think somewhat edifying. Recommended to the attention of our surgeon-friends

By W. W. PENNELL, M. D., Mt. Vernon, Ohio

MORIARTY met Hogan in the park, each taking his customary Saturday half-holiday.

"How're ye, me b'y?" asked Moriarty.

"Oi'm convalescent, so the dochter sez."

"An what's thot, Oi'd be loiken to know?"

"Divil do Oi, ner Oi don't care, so long ez Oi kape faalin' this a-way."

"'Tain't nothin' loike toobookalasis, is ut?"

"Now, Tim Moriarty, don't be foolin'. Whin Oi'm telling' Oi don't know, laave ut alone. Oi axed the dochter if ut was ketchin'; he grinned an' said 'no'."

"Yis; but, Pat Hogan, wasn't it Bridget Hogan that tole Mary Moriarty that her hoosbin' was sune to laave her a widdy?"

"Sure's the worl', Moriarty, the swaate darlin'. But, if Oi kape an faalin' foine ez a peacock, ut'll be manys the year till she'll be me widdy."

"Thot's all roight, Pat; but hain't ye bin sick, nor nawthin? Oi was kaapin' me boots gr'ased, me b'y, ferninst the wake, whin Oi hoord Biddy an' the childer was to be arphins."

"Now, Tim Moriarty, you're the b'atenest mon Oi've iver saan. Bad luck to yees, onyhow, for wantin' to kape aloive the divilish troubles thut Oi droonded lost noight at Casey's saloon. If ye'll take a saat wid me by the binch, Oi'll tell ye how near Biddy Hogan come of bein' me widdy, an' the divil

take the mon who joomps into Pat Hogan's boots!"

"Yis, but the rapoort thut ye'd got riddy fer Davy Jones's locker—how's thot?"

"Oi'm afther tellin' ye, if ye'll kaap yer blatherin' tongue still a minit. Many's the toimes Oi've tould ut the day, an' Oi'm domned toired uv ut, Moriarty; domned toired, Oi tell ye."

"Will, thin, go awn; *Oi'm* as good as the rist. Basoides, Oi'm yer mother's own coosin, thraa toimes ramoved. Don't have no fam'ly sacrits, Pat, me b'y."

"Thruer fer ye, Tim Moriarty. Oi'll kaap no fam'ly sacrits from yez, but whin Oi remimber the toimes Oi've tould ut over an' over, me stoomick gits sick, an' Oi faal ut'd baan noicer to doie an' lay undher sax faat uv gravel. But, whin Oi goes home an' saas Bridget an' the childer, the cow, the pigs, an' the goat, me own flish an' blood, Oi'm domned glad Oi'm living'."

"Yis; but, what wus the matther wid ye?"

"O Oi'm sick! Oof—oof!"

"But, Pat, remimber, no fam'ly sacrits."

"Thruer, thruer, but the mim'ry uv ut makes me saasick. Oi faal now loike Oi did whin Oi was thraa days out from Cork. If Oi had wan good pool at the joog, me dhroopin' sperits an' fa'lin' mim'ry'd be good's the King's goold."

"Ye kin have a drap of me bottle. Oi kaap some wid me fer emargency."

"Fer whot?"

"Emargency. Oi don't know what ut is, a-tall, a-tall. Maabe, ut's loike co—con—what?"

"Convaliscint?"

"Yis, Misther Hogan. We're the b'ys't has somethin' an' don't know whot ut is. Onyhow, Pat, take a good dhrink. Thut's roight, me b'y. Nixt toime Casey fills me



DR. W. W. PENNELL

bottle Oi'll ax him whot emargency manes. Ut's a moighty sthrange faalin', Oi'm a-thinkin', an', whin ut comes awn, Oi dhrive ut away wid a little swally. How'd ye faal, Mister Hogan?"

"Foine es a fiddle—h'aps foiner'n the faalin's o' convaliscint."

"An' kin ye tell yer throubles now, me b'y?"

"Oi kin, Mister Moriarty, an' Oi wull."

"Well, thin g'wan. Oi'm listenin'."

'Hould yer blatherin', Tim Moriarty, Oi've got the flure. You remimber Oi was baarin' the hods uv bricks fer Murphy's new restaurant, a waak comin' Monday. Wull, all to wanst Oi got a divil uv a hard paan in me roight soide, an' me hod fell to

the ground', an' Oi comminsed to squ'al wid the misery uv ut."

"Did ye call the dochter?"

"No, not thin; wan uv the min was Chrustian Sci'nce, an' he tould me, me faith was wrong; Oi jist b'laved Oi had a paan. He tould me Oi cood save manys the dochter bill by b'lavin' there was no sufferin', ixcipt in the moind. Oi tried moighty hard to push me faath to the pann-quittin' place, but wan of thim jabs'd come in the twunklin' ov an oye, an' me faath'd be gone. Oi tould 'im to g'way wid his palaverin', 'at Chrustian Sci'nce moight he a foine posy fer yer button-hole, but was domned poor truck fer Pat Hogan thut was doyin' twinty deaths."

"Whot thin, Pat?"

"Wan ov the b'ys wint fer Dochter Monihan, but he was out, an' so he fitched Dochter Lilliman. Lilliman was wan ov thim oysterpasses, an' he rammed me roun' the ribs an' poked me in the spoine av me backbone. Thin, he looked at me moighty solemn, an' tould me thut me spoine-bone was crucked an' out av j'int, an' was stickin' me bowels, an' caused a long name—'pendisatis; that's ut, 'pendisatis."

"Whot's thot ag'in, Pat Hogan?"

"Oi don' know. Ut's somethin' moighty bad, loike bein' in a town where's no whusky to be foun'. Oi'm glad the dochter didn't faal me for a longer name, the way he charges."

"Whot nixt, Mister Hogan?"

"They took me home. Whin Bridget saw the min wid me, the darlin' come roonin' wid tears in her oyes. 'What's wrang?' she cried.

"'Pendisatis, Oi whuspered. 'Oi'm so glad ut ani't worse'n 'pendisatis,' she whuspered back, houldin' onto me hand."

"They put me to bid wid me clothes awn, fer the dochter said 'pendisatis was terruble dangherous. Thin he roobed me this way, an' thin that way; but thot divilish shtab'd come ivery minnit er so, till, by me sowl, Oi wished Oi was did."

Moriarty looked disappointed. "Coodn't the dochter roob yer spine intil j'int, so the big name coodn't hurt ye?"



"Yis; so he sid. Afther roobin for two hours, he tould me woife an' the b'ys that the bone was straight es a sthring, an' the paan'd quit jabbin' as soon at the nerves foun' ut out."

"Did they foind ut out?"

"Not wan bit av it. We waited an' waited, Bridget an' me; me faather an' muther, Bridget's faather an' muther, our bruthers an' sisters, an' the praste stood ut ez long as they cood, an' thin they sint afther Monihan ag'in."

"Monihan comes in, mad ez cood be, an he sez, sez he, 'What's to pay?'"

"The ould man sez: 'The Devil's to pay; Pat has the 'pendisatis!'"

"'Where's yer paan?' sez Monihan. 'Roight here,' sez Oi, pointin' to me soide. Doc rammed his hand down to where Oi pointed. The next minnit, he raised up."

"'Pendisatis Hell!' sez Doc., houldin somethin' in his hand. 'Here's yer 'pendisatis—an ould fish-hook in your pants!'"

## TREATMENT OF PROSTATIC HYPERTROPHY

The history of prostatic disease, the functions of the gland and its minute anatomy, and the symptoms which suggest disease of this organ; to be followed by a discussion of their treatment

By GEORGE H. CANDLER, M. D., Chicago, Illinois

UNTIL within comparatively recent years the prostate and its disorders received little or no attention from the physician. When some man advanced in years presented himself with entire retention of urine, catheterization was resorted to, its continuous use ordered, and thus the unhappy patient was ushered into that distressful period known as "catheter life," which ended only with the end of his life.

In the larger cities, here and there, some surgeon ahead of his time "tunneled" the prostate or attempted, by introducing dilatable catheters into the bladder, to maintain patency by continuous pressure. Harrison's olivary bougies were in the early eighties considered the most efficient instruments obtainable for this purpose. "Tunneling" often proved fatal (almost always unsatisfactory), and as the study of physiology and anatomy conjointly was not undertaken seriously even at that late day (indeed, the student of today would benefit were more attention paid to this subject), operation of a radical character was done only to save life. Gradually the prostate began to receive more general attention, and prostatotomy—often combined with lithotomy—was not

infrequently performed in Fergusson's time, *via* the perineum.

### *Early Prostatic Operations*

Mercier, in 1837, advocated the use of the prostatome—which was used through the urethra—and Bottini, in 1873, improved upon his technic by using a galvanocautery. Then Gouley applied this idea, making a urethral opening, however, and for years, with a modification here and an improvement there, the Bottini operation has held precedence. Meyer, of New York, and Horwitz, of Philadelphia, are known as its most ardent advocates in this country. To-day the hypertrophied (senile) prostate is removed daily either by the suprapubic or perineal route.

Young has recently introduced a "conservative" perineal prostatectomy, preserving the connection between the ejaculatory ducts and the urethra. By all other methods this is a practical (though not theoretical) impossibility, the urethra giving way as the gland is finally shelled out from its sheath.

Despite the advances which have been made along surgical lines and the comparatively safe and effective operations which

now exist for the removal of the hopelessly enlarged prostate of the senile patient, little or nothing has been done by the physician to prevent the *occurrence* of such hypertrophy, or at least to ensure its nonappearance prematurely. I hope, later on, to consider the pathological and (supposedly) natural processes which take place in the prostate from puberty to senility, but at this moment I am desirous of particularly calling attention to the prostatic engorgements (hypertrophies) which are encountered—if we look for them—in men of from twenty-five to forty. It is hardly to be supposed that, normally, fibrous degeneration would have set up at forty (even if we accept the theory that the male prostate and female uterus undergo a similar degenerative process at the “change of life”), for the normal undiseased male of that age is at his sexual zenith. It is true that modern customs—sexual and otherwise—tend toward early sexual decay and it is also unquestionable that the modern bladder and bowel are subjected to strains never intended.

#### *Functions of the Prostate*

The prostate gland is not to be regarded entirely as a “sexual” organ. Its functions are dual: to aid in ejaculation of the semen and to constrict the neck of the bladder. Long after its importance as an ejaculatory organ has ceased its utility in the latter role remains; indeed in old age when enervation increases and muscular relaxation obtains, its constricting action is particularly needed. If the prostate were merely a procreative organ, the modern man of sixty, or less, years might perhaps be content to take a choice between Osler’s chloroform bottle and prostatectomy, but when, as a matter of fact, the proper performance of one of the most important eliminative processes of the body depends upon the normal condition of the prostate, it would seem that this gland should remain in working order until the last. Men live and accomplish much long after procreation is desirable—if desired!

In order to understand how general enlargement of the prostate is, the physician

should make it a practice to examine all male patients. He will be surprised to find that a very large percentage of men over thirty possess prostates more or less hypertrophied—not *necessarily* fibrous—and further investigation will enable him to connect a long train of disagreeable symptoms with this engorgement.

An *acute prostatitis* is usually easily recognized (and generally gets treated more or less satisfactorily), but the subacute condition which remains too often is almost invariably neglected, and as a result sooner or later a chronic enlargement results which, in my opinion at least, serves to produce prematurely just those abnormal conditions which end in true senile (fibrous) hypertrophy.

#### *Minute Anatomy of the Gland*

It is absolutely necessary for a complete understanding of prostatitis that we have a clear conception of the minute anatomy of the gland and adjacent structures. Too often men call any pelvic inflammation a “prostatitis,” and not rarely the general practitioner fails to recognize a marked enlargement of the prostate, or of a lobe.

The central lobe and the verumontanum (the latter of vital import when catheters or other instruments are passed) are, alas! *terra incognita* to many. It would be tedious were I to give here a detailed description of the anatomy of the prostatic region; equally out of place perhaps would be an extended study of the gland itself. This information can easily be obtained at leisure from such excellent writers as Fuller, Taylor or (most complete of all) Deaver.

Briefly, the normal prostate is a firm, muscular body lying (in its own sheath) around the neck of the bladder. It is about the size of a Spanish chestnut—which in a way it resembles in shape—the thicker portion of the gland lying below the vesical neck and between that organ and the rectum. In the fetus two lobes are distinguishable about the fifth month, at which period they join around the urethra. At birth this bilobed condition can be observed, the gland then lying largely behind

the urethra. Early anatomists considered the prostate to consist of several glands and speak of the "*glandulæ prostaticæ*." As a matter of fact the prostate is not a gland at all but a unique bundle of muscular tissue containing mucous glands which open upon the prostatic urethra. The "lobes" are more or less imaginary, the "third," or median, lobe having been featured since Everhard Home "discovered" it as the seat of unnumbered disorders.

In hypertrophied conditions various portions of the prostate may become peculiarly prominent and the median section immediately surrounding the urethra and projecting into the vesical cavity has received undue attention. The idea of "right and left lobes" is conveyed to the mind of the examiner when palpating the gland through the rectal wall, for, as I have stated, the muscular fibers extend backward and the lower (posterior) portion attaches to the seminal vesicles. The ejaculatory ducts also pass through the infundibulum of the prostate, hence the thickness of the body upon each side and posteriorly is materially increased. Quite often enlargement of the sac upon one side in a case of vesiculitis has caused the examiner to diagnose enlargement of that lobe.

#### *More of Anatomical Detail*

The prostatic sheath is in front intimately connected with the pelvic fascia and behind becomes continuous with that covering the bladder: on the sides it is identical with the common covering for bladder and rectum and beneath with that surrounding the seminal vesicles. Between this fibrous sheath and the rectal wall is a space (French: *espace decollable retroprostatique*) which "allows the rectum to move freely, the prostate in itself being held stationary by its attachment to the pelvic fascia."

Attached to the lateral borders of the prostatic sheath are many veins (the prostatic plexus) which are prone to become engorged and, in the aged, varicosed. The dorsal vein of the penis just prior to its passage beneath the subpubic ligament is provided (as a rule) with three valves, then

dividing into two branches, it follows the sides of the prostate, being joined by veins from its substance. (No tributaries join from the parietal veins of the pelvis.) The arteries are many but small: they arise from the pudic, the inferior vesical and middle hemorrhoidal. The vesicoprostatic is the largest vessel, and is derived from the inferior vesical running along the lower bladder to the gland.

The *nerve-supply* merits careful study. It is derived chiefly from the sympathetic system through the pelvic plexus. Some medullated fibers—derived chiefly from the third sacral, also from the second and fourth—also exist. The nerves accompany the arteries. The bladder, urethra and cavernous tissue of the penis derive their nerve-supply from the same source. It will readily be seen that innumerable reflex-phenomena may be observed in those patients possessing deranged prostates.

Space prohibits further attention to this portion of the subject, but even this brief consideration should suffice to show the *probability* of prostatic engorgement; the *difficulty* of relieving it, and the *certainty* of many and troublesome reflex-disorders.

Histologists class the prostate as a "compound tubular gland" (the glandular tissue being most marked laterally and below the urethra, little being in evidence anterior thereto). The *prostatic urethra* extends from the bladder to the triangular ligament, becoming here the membranous urethra. The prostatic urethra is surrounded by elastic tissue running circularly about it, "figure-of-eight processes surrounding the prostatic ducts just beneath the mucosa." Midway along and on the floor of the prostatic urethra is the orifice of the uterus masculinus and the openings of the prostatic ducts, one on each side of the verumontanum. The ejaculatory ducts lie on the margins of the uterus masculinus. The latter is an oval saccule about one-fourth of an inch long and is lined with mucous membrane bearing small tubular glands similar to those found in the female uterus. It also possesses a layer of involuntary muscle-fiber and is enveloped in a fibrous

sac of its own. The orifice readily admits a small probe or catheter and in unskilful hands the steel sound is liable to enter and cause irreparable damage.

#### *Why the Prostate Becomes Diseased*

Considering the prostate it is not difficult to see that it may suffer from bacterial invasion of the urethra, from vesical disorders, rectal pressure and other sources, to say nothing of distinctly innate abnormalities.

Today senile hypertrophy, whether it follow attacks of gonorrhea, urethral catarrh, "prostatitis," etc., or not, is regarded as a form of arteriosclerosis by many, while others, again, look upon the hypertrophied prostate as being closely akin to the fibroid uterus. As a matter of fact, pathologist, physiologist and therapist alike are woefully devoid of information upon the subject; the surgeon alone cheerfully diagnoses "hypertrophy of the prostate"—and proceeds to extirpate the offending body.

Had the general practitioner earlier used his finger and a proper amount of intelligent treatment it is quite probable that the surgeon would have had no opportunity to make the diagnosis.

The frequency of specific urethritis must be looked upon as the main cause of prostatic engorgement, though sedentary habits, constipation and inattention to the emptying of the bladder alike demand recognition.

#### *Symptoms Directing Attention to Prostate*

I would here call particular attention to a combination of disorders which I have convinced myself often lead to prostatic disease—perhaps to premature "senile hypertrophy." Clinically it matters a great deal whether we have merely an enlarged prostate or fibroid degeneration; we can cure the one, the other refuses to yield, as a rule, to treatment. The patient I speak of calls for relief from backache, nervousness, priapism, "pain in the bladder," difficulty at stool, or any one of half a score of symp-

toms. Sometimes he simply "can't sleep and feels tuckered out an hour after he gets out of bed." His meals don't "sit well" and his head aches.

One would hardly go to the prostate here, but nevertheless an examination will reveal the cause in an instant. (*Remember the sympathetic!*) The sphincter ani will be found tight, often hardly admitting the little finger readily, and the internal sphincter shuts down on the digit like a piece of whip-cord. Inside the rectum balloons out and is tense and smooth to the touch. The prostate is readily felt and is large and hard. Sometimes enlargement is uniform, again one side is distinctly more involved than the other. The patient has "trouble with his bowel." The feces descend into the sacculated rectum and harden there. The dry, constricted anus refuses to dilate or receive a portion of the noduled mass, and when finally by much straining and great exertion a stool is finally secured the passage of the feces becomes a veritable torture.

Each succeeding experience makes the man dread the next, and day after day the prostate is subjected to pressure (remember the bowel cannot well dilate posteriorly) which ends in congestion—and hypertrophy. The other symptoms naturally follow.

It is all very well to say that the disorder here is "constipation." But it isn't. There would be no constipation were the sphincter ani and rectal wall normal. And even then, were the prostate not involved, we should not get the profound systemic disorder we do find.

The primary ill seems to be rigidity of sphincters and an atonic condition of the lower bowel (rectal ampulla). Relieve these and the patient soon passes normal, formed stools. But even with this accomplished the ill-used prostate will require attention before recovery takes place. I have seen not one, but a score, of such cases and now have come to realize that we may have prostatic congestion of rectal origin.

[To be Concluded]

# SOME INSULTS TO OUR INTELLIGENCE

Insults to and slurs upon our profession and the sources from which they spring: How long shall we bear them? What the doctor really wants in his drugs

By GEORGE S. BROWNING, M. D., Sioux City, Iowa

Professor of Theory and Practice of Medicine and Electrotherapeutics in Sioux City College of Medicine

## A MODERN MIRACLE

"Truly miraculous seemed the recovery of Mrs Mollie Holt of this place," writes J. O. R. Hopper, Woodford, Tenn., "she was so wasted by coughing up pus from her lungs. Doctors declared her end so near that her family had watched by her bedside forty-eight hours; when, at my urgent request, Dr. King's New Discovery was given her, with the astonishing result that improvement began, and continued until she finally completely recovered, and is a healthy woman today." Guaranteed cure for coughs and colds, 50c and \$1.00 at ———, druggist. Trial bottle free.

## RESTORED TO HEALTH BY VINOL

Mrs. ———, of ———, N. Y., says: "Our little daughter was troubled with a bad cough which nothing seemed to relieve. We tried different doctors and medicines without benefit. The codliver oil preparation, Vinol, was recommended, and before she had taken one bottle her cough had stopped, and her condition greatly improved. She now has a splendid appetite. . . ."

Our well-known druggist, Mr. ———, says Vinol is a grand medicine for children, it produces bone, muscle and rich, pure blood. . . . We just wish every mother in Sioux City who has a sick, puny or ailing child would try Vinol on our guarantee. ———, druggist.

The above ads were recently clipped from current numbers of the local papers. Now, so far as the truth is concerned, there is of course not a faint trace in these mendacious exploitations of nostrums, as every intelligent person realizes. The degree of injury inflicted upon the system of the gullible consumer may not be determined; but that of course is his business and not the doctor's—that is, not until the medical man's aid is sought when real relief is demanded.

## *The Harm Not One of Dollars Only*

What material harm these advertisements can produce upon the physician's finances directly is an inconsiderable quantity. If, then, they contain no truth, injure only the patient foolish enough to squander his good money for, and consume, them, do not de-

crease the doctor's income, why should we as physicians offer any objection to them.

It is simply a matter of principle; it is another instance of imposition upon the doctor's good name by unscrupulous friends (?) for the sake of a few cents' profit that may possibly be acquired. True, it may be that these ads are written by the nostrum makers, but nevertheless the local druggist sanctions the slander of his professional friends and allows his name to appear as a guarantee of the superiority of such advertised dope over the ability of the educated physician. He subscribes to a bunch of deliberate lies, libeling the medical profession upon which he depends for his existence; that is, if to his practice of pharmacy there is attached any more dignity than that obtaining in a notion store or grocery where patent medicines are sold.

## *How Can the Druggist Justify This?*

By what legal or moral justification can the druggist do this? Has he no sense of justice or no moral principle beyond that of getting all the "coin" he can by fair means or by foul? Let it not be understood, however, that anyone can justly censure the druggist for making all the money he can, provided he does it in a right manner or by legitimate advertising. The masses, the great *hoi polloi*, are clamoring and ever will clamor for patent medicines and nostrums, until they become sufficiently educated to discern the fact that they are thereby playing the role of pitiable dupes, and present indications are that such a happy condition will never result this side of the golden millennium.

Such concoctions, then, are a legitimate part of the druggist's stock, and let him ad-

vertise them if he so chooses, but let him do it in an honorable way and not be the penny-bribed tool of a slanderous, conscienceless nostrum manufacturer. He should have moral stamina and backbone enough to "turn down" these despicable ads slurring the character and ability of the members of the greatest profession on earth instead of subscribing to the libelous implications that all doctors are quacks or ignoramuses.

Who is the druggist and what is he in comparison to a worthy physician that he should presume to criticise the latter's skill or knowledge? The embryo drug-man of



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this character goes to a school of pharmacy where he studies materia medica and elementary chemistry, meanwhile learning to read prescriptions, mix salves, make tinctures and extracts, comes back to an alleged drugstore, and proceeds to practise the dignified art of engineering a soda-fountain; then, while hugging his condensed education, the Pharmacopeia or Dispensatory, he has the unmitigated "gall" to imply or even assert that his medical friends are hopeless idiots, totally unable to care for sick folk, but that "Zimpo's Nutrilium" can cure where doctors fail.

Think of the direct insult! Yet we go into their stores and they slap us on the

back, at the same time projecting a beautiful line of jolly with "letting you have it at cost, Doctor" (which is about 25-percent profit for them), and we swallow it all, as our hatbands begin to get tight, and think we are little tin gods. I would as lief have a supposed friend of mine come up to me and say, "Doctor, you are a damned fool," as to have advertisements of the character cited published by hypocritical druggist friends.

What excuse can they offer for adopting such a reprehensible course? Probably their most time-worn and decadent defense is that doctors themselves are to blame for the patent-medicine evil because the large percentage of their prescriptions call for nostrums or their relative products, the proprietary compounds.

#### *Two Sides to the Proprietary Question*

Now, there are two sides to the proprietary question, and from the physician's side, who must ever keep his patient's welfare foremost in consideration, it may well be asked why he should not prescribe or use these preparations to a certain legitimate extent. Men of learning have devoted their time and labor to perfecting the manufacture of active and valuable compounds. Naturally they have, by their studied labors and investigations, accomplished the production of stable, elegant and efficient preparations which could not possibly have been evolved from the crude and ancient methods of the old compounding and dispensing doctor. Then why, in the name of all that is reasonable and progressive, should not this superior product be prescribed? Is it not logical to assume that drug preparations can be improved in proportionate degree to other advances in the science of medicine?

If after years of study and experiment a manufacturing chemist evolves a compound of silver or iron, for instance, that has proven superior to the old official preparations, why not prescribe it? Why, for example, should one cling to the use of silver nitrate in various infections when the newer organic compounds, such as argyrol, protargol, albargin, etc., have been proven so vastly superior in every way?

Is anyone so unprogressive as to decry the modern small, concentrated and easily administered tablet or pill, especially those of the active principles, giving preference to the huge, nauseous and uncertain decoctions or boluses crudely prepared by our revered pioneers in medicine? As reasonably condemn the modern compact, asepticizable surgical instruments in favor of the clumsy, dirty, uncleanable instruments used by our forefathers.

*The Main Thing is—"Deliver the Goods"*

But, again, let it not be understood that I am championing the cause of their manufacturers or the use of those secret remedies with which, and how, the nervy, glib-tongued detail-man (which variety, by the way, is happily becoming less) patronizingly informs the doctor he should treat his patients. I refuse to be directed by the agent of a drug factory as to how cases shall be treated, but if his employer furnish an eligible compound of synergistic drugs, with the formula for the same, I care not for the details of the process of manufacture—how long the ingredients were triturated or how many hours it took to filter the liquids, or which drugs were put in the containers first, and what not. I would as readily rely upon the honesty of such a reliable maker and the efficacy of his drugs as upon that of a local druggist, with his crude and limited means of manufacture and his perhaps aged and inert drugs that he wishes to use up. So long as the "proprietary" "delivers the goods" to the patient, assisting his recovery surer, quicker and more agreeably than do the official remedies or those *sanctioned* (Oh, supreme glorification! !) by chemists and medical editors on the throne of authority (?), so long will the proprietary be used by the real physician whose backbone contains a more rigid ingredient than putty and whose cranium is filled with gray matter instead of molder's mud.

#### *The Alleged Incompatibilities*

Frequently may be heard the criticisms of druggists or even physicians of the incompatibility of ingredients in the "ready-

made" prescription, particularly because of physiologic antagonism; but concerning this point, as well as many others, there is much acquired knowledge (?) that must be *unlearned*. For instance, it has been almost universally taught that digitalis and aconite are direct physiologic incompatibles, and their administration together would be the height of therapeutic absurdity; but those who have combined clinical evidence with that of the test-tube and experimental rabbit know that the simultaneous administration of digitalin and aconitine is the almost universally indicated treatment of practically every febrile inflammatory process, and cuts short many promising cases of the acute specific infectious diseases. Hence such alleged "illogical" or "incompatible" combinations appearing in a ready-made pill or tablet are not necessarily to be condemned, in spite of pharmacopeial teaching or decades-old therapeutic textbooks.

But to get back to the drugstore. While the charge of prescribing nostrums and illegitimate proprietaries may not be entirely refuted, yet that affords no just reason, legally or morally, for the druggist to libel the ability of the medical profession and exploit worthless or dangerous secret remedies to the physician's derogation.

#### *What are We Going to Do About It?*

These are the conditions present: The question is, "What are we going to do about it?" The only thing to be done so far as I can see is to withdraw patronage as much as may be from such drugstores and confer it upon the reputable and honest druggists who have a character which cannot be bought for a few dirty dollars. And there are such druggists.

It also might "help some" if the physician should himself dispense a considerable share of his medicines, a fairly complete stock of which he could easily carry in these days of compact, neat tablets and minute pills, especially those of the active principles, which are now available in so elegant a form, and are so uniform of quality, so concentrated as regards space and so energetic of action.

# MANDRAGORA: A PLANT WITH A HISTORY

An old remedy, which was known and used two thousand years before Christ, which was the basis of many superstitions by the agents, and which still excites a peculiar interest

By J. M. FRENCH, M. D., Milford, Massachusetts

**M**ANDRAGORA officinarum, or *atropa mandragora* (common mandrake, mandragora) a perennial herbaceous plant belonging to the potato family, natural order Solanaceæ, is a native of Spain, Crete, Cilicia, Syria, and North Africa. It must not be confounded with the American mandrake (*podophyllum peltatum*) which bears no relation to mandragora. It has a stout stem bearing a tuft of ovate leaves, and a thick, fleshy, spindle-shaped root, which often is forked beneath, and is thereby compared in shape to the human figure. The flowers are solitary, with a purple, bell-shaped corolla. The fruit is a fleshy, orange-colored berry.

## *The History of Mandragora*

This plant has long been known for its poisonous properties, and its supposed wonderful and mysterious virtues. In ancient times, according to Isidorus and Serapion, it was employed as a narcotic to lessen sensibility in surgical operations. More than 2000 years before Christ it was known to the Babylonians, and a figure cut from its root was worn as a charm or amulet to prevent sterility and promote fecundity, while the same superstition is still cherished by the vulgar in some parts of Europe. The root, from its forked shape, was thought to resemble the human form, and was fabled to cry out with frightful shrieks when it was uprooted, the cries being fatal to any human being who should listen to them. To prevent this catastrophe, it was the usual custom to make use of a dog in gathering the plant, and allow him to be sacrificed to the wrath of the demon who was supposed to inhabit the plant. An old writer describes the method of gathering the mandragora plant in these words:

"To gather ye mandragora, go forthe at dead of nyght and take a dogge or other animal and tye hym wyth a corde unto ye plante. Loose ye earth about ye roote, then leave hym, for in hys struggles to free himself he will teare up ye roote, whych by its dreadful cryes will kyll ye animal."

Sometimes certain rites and ceremonies were performed before gathering the root, such as making three circles round it with a sword, and loosening the earth with a spade, meanwhile blowing a loud horn to drown the cries of the fatal herb.

## *Superstitious Ideas Concerning It*

Many other weird superstitious notions were held by the ancients, which are supposed to have arisen from the rude resemblance of the bifurcated root to the human figure. On being torn from the ground it was thought to utter horror-inspiring groans, which caused madness, and even death. It was also an emblem of incontinence; soporific qualities were attributed to it; it was used in magic; and it formed an ingredient in love potions. Theophrastus is the earliest writer on botany to allude to the virtues of mandragora, and among them he mentions the property of producing sleep, and its use as an aphrodisiac in love potions.

It was said that mandragora grew always more luxuriantly near or under a gallows, as the flesh of the felon hanged thereon was thought to furnish the most suitable nourishment for the root, in which dwelt an evil spirit.

Dioscorides was the first to mention the use of mandragora as an anesthetic, and he shows that it was used in his day both as a hypnotic and an anesthetic. Shepherds are made sleepy by eating it, he tells us, while "three wineglassfuls of a liquid preparation



of the root are given to those who are about to be cut or burnt, for they do not feel the pain." The same author refers to a substance called "morion," believed to be the white seed of the mandragora plant, which is mentioned by Pliny as a narcotic poison. "A dram of it taken at a draught, or in a cake or other food, causes infatuation, and takes away the use of the reason; the person sleeps without sense, in the attitude in which he ate it, for three or four hours afterwards. Physicians use it when they have to resort to cutting or burning."

Apuleius says: "If anyone is to have a limb mutilated, burnt or sawn, he may drink half an ounce of mandragora with wine; and while he sleeps, the member may be cut off without any pain or sense."

Avicenna, the father of Arabian medicine, gives special directions as to the employment of mandragora, both as an anesthetic and a hypnotic; while Averrhoes, another Arabian physician, refers to the soporific effects of the fruit of the same plant. Galen also alludes to its powers to paralyze sensation, and Paulus Aegineta states: "Its apples are narcotic, when smelled to, and also their juice, that if persisted in they will deprive the person of his speech." According to Isidorus, confirmed by Serapion, "a wine of the bark is given to those about to undergo operations, that, being asleep, they feel no pain."

Celsus recommends a pillow of mandragora apples to induce sleep.

#### *The Alkaloidal Content of Mandragora*

Mandragora is closely allied to belladonna, and is the source of similar or identical alkaloids. Cushny speaks of mandragora autumnalis, or atropa mandragora (mandrake), as containing mandragorine, which is perhaps a mixture of several of the better-known alkaloids. Elsewhere he says: "Mandragorine, found in mandragora (mandrake), appears to be closely allied to atropine, though it has not yet been subjected to any careful analysis."

Potter says, the plant mandragora autumnalis contains mandragorine, which is probably a mixture of atropine and hyoscyamine.

The U. S. Dispensatory, edition of 1907, says that Crouzel isolated an alkaloid, mandragorine, which is found similar in properties to atropine. It is colorless, inodorous, deliquescent, and melts at from 77° to 79°C. (170.6° to 174.2° F.). It seems to be isomeric with atropine, but is not converted into it by alkalis. The sulphate and the hydrochloride are crystalline and deliquescent. A second alkaloid in much smaller amount was also extracted, of which the gold and platinum chlorides were formed.

Sir Benjamin Ward Richardson once prepared a draught according to the recipe of Dioscorides, and drank it himself. He tells us that the phenomena repeated themselves with all faithfulness, and there can be no doubt that, in the absence of our now more convenient anesthetics, "morion" might still be used with some measure of efficacy for general anesthesia.

Mandragorine has often been spoken of in connection with the Keeley cure for inebriety, and the claim has been made that this agent was the essential drug in the treatment, the real "gold-cure," in fact. The impossibility of this is evident, when it is remembered that a careful investigation during the period when the Keeley cure was at the height of its popularity developed the fact that mandragorine was practically an unknown drug, none being obtainable in any of the drug markets of America. While surely, if this had been the agent used in the so-called "gold cure," many fortunes would have been made in its marketing.

[Older readers of CLINICAL MEDICINE will recall the attempt once being made to exploit an alleged morphine cure which was claimed to contain mandragorine. Attention was called to it in our pages at the time, and it was shown that it was almost if not entirely impossible to procure mandragorine in this country; that it is an impure, uncertain and toxic alkaloid, at the best; that its action, for all practical purposes, is the same as that of atropine; and that to give it to cure people of the morphine habit "is like giving salt to cure a man of the thirst habit."—ED.]

# MEDICO-PHARMACEUTICAL GRAFT

Some forms which it assumes, especially as regards the giving and taking of commissions on prescriptions; also, the offering of commissions by hospitals

By E. S. McKEE, M. D., Cincinnati, Ohio

IN this age of graft it may not be amiss to say a few words about the subject in so far as it affects medicine and pharmacy. I think these two professions will be found as free from this canker as any other two callings, but it is early treatment that saves and a too-late resort to the pruning knife does only harm.

## *Commissions on Prescriptions*

The taking of commissions on prescriptions, though rare, does occur occasionally. There have been but two well-authenticated cases in Cincinnati during the author's experience of more than a quarter of a century. It is needless to say that in both cases both the physicians who asked or acceded and the druggists who offered or complied needed the money and did not prosper from their dishonest practices. This subject has appeared in the courts twice recently by physicians suing to collect commissions from druggists which the latter had promised them. The amount of the rake-off was 25 percent. One suit was brought in Racine, Wis., and the other in Benares. Both suits were disallowed, both judges claiming that an agreement of this sort was illegal and against public policy.

It is surprising to find in the professions of medicine and pharmacy even a few who would stoop so low to dishonor their high callings, but the gratitude we feel at the rarity of the occurrence does not enable us to hide the shock experienced when we read of medical men who are so hardened in iniquity that they advertise their traffic in the safety and lives of their patients. It goes without saying that a doctor or a druggist who descends to such practices either for want of funds or absence of honor is not a safe or fit man in his calling. One would

think that they would rather lose their commission than advertise it by suing for it. Who ever heard of an abortionist or a courtesan suing for their fees?

In *The Medical World* for November, 1907, p. 464, we find a letter from a doctor who signs his name in full and which appears in the American Medical Association Directory as an old-time graduate from a very respectable college. Under the heading, "It Pays to Keep Your Own Drugs," after relating his experience with keeping his own drugstore, he says: "Coming to Benton Harbor, I commenced writing prescriptions; but it did not take me long to find out that all I could get from my patients together with a percentage on my prescriptions from the druggist scarcely paid for the medicine I carried in my case."

*The Practical Druggist*, of New York, under date of November, 1907, p. 255, under the title, "Druggists Forced to Grant Commissions," says: "Considerable friction has developed of late between the druggists and physicians of New Castle, Pa. It is reported that there is a store owned by a combination of doctors who endeavor to send all their prescriptions thitherward, and that a second group of physicians demand and receive commissions from certain druggists on their prescriptions. Thus it happens that a druggist in New Castle, if he desires to do much prescription business, apparently finds it necessary to let himself be 'held up' for a commission by some of the doctors, for it would seem that a good deal of the prescription business not so distributed goes to the store owned by the group of medical men. The New Castle druggists seem to be up against it good and hard. The State Medical Society has been informed of the situation, however, and has

started an investigation which, it is hoped, will afford some relief."

### *Laying Himself Open to Suspicion*

Suspicion accrues to that physician who unduly urges his patient to take his prescriptions to one particular pharmacy that he is bribed to do so by a commission from the pharmacist. The ophthalmologist who insists on his patients purchasing their glasses of a particular optician lays himself open to the same suspicions. It is true that the physician should direct and insist that his patient should take his prescriptions to the best pharmacist in his neighborhood, and the oculist should do the same with his prescriptions for glasses. In large cities there are so many reliable pharmacists and opticians that partiality is unjust and unwise, and the good of the patient is subverted to the monetary advantage of the physician and pharmacist or optician. Biphlebotomy of another kind is the prescribing under a name, number or cipher understood only by a certain pharmacist with whom the physician is in collusion. This obliges the patient, no matter how disagreeable, difficult or distant, to go to this particular pharmacist under the impression that none other is capable or able to put it up properly, thus working an insulting injustice to other members of his calling.

Previous to the earthquake San Francisco suffered from the sins of commission as well as omission. The pharmaceutical press contained a statement of the terrible condition there. The writer, thinking it over-drawn, had the article sent to a prominent member of the medical profession there, who replied that there was only too much truth in it. He said that the doctors of San Francisco had it in mind to fight the custom some day, but were then too busy with the patent-medicine fraud to take up additional fights. It is to be hoped that the earthquake, or rather the fire, has purged them of this unclean thing. It was at that city where it was related that some years ago a certain drugstore newly started found itself losing money from the start. The proprietor packed up his stock and

moved to New York City, where with the same stock and clerks, buying only a new city directory, he made a decided hit. The reason of his failure in San Francisco was his refusal to pay tribute to the physicians of that city for the privilege of filling their prescriptions. Our authority on the matter said that at that time there was only one drugstore in San Francisco which did not pay a percentage to some physician on every



DR. E. S. MCKEE

prescription filled. Not only the pharmacist, but also the trained nurse, according to our authority, had to pay tribute to the penurious physicians of the city of the Golden Gate. . . . It was said that the trained nurse had to pay over one-half of her first week's salary to the physician who recommended her. Even a divy was expected from the undertaker if medical services proved unavailing. Comment upon the medical and pharmaceutical morals of San Francisco is unnecessary. Repeated opportunities have been given for a denial of this condition but none are forthcoming.

### *Commissions from Hospitals*

Those in position to be well advised claim that some hospitals offer inducements, solid and liquid, to police and patrol runners,

for the bringing in of patients. The hospital, it is true, is the greatest grafter the doctor has to contend with when it comes to accident cases. It is difficult for the doctor to keep his own patients from being hauled off to the hospital right under his nose by energetic squads of patrolmen. It has even happened in my own experience where they have endeavored to haul off the members of a doctor's own family when injured and only the most energetic remonstrances prevailed.

Antigraft legislation has been remarkably active of late in England, Australia and America. The Prevention of Corruption Act which has been recently passed by the British Parliament indicates that the giving and receiving of secret commissions must have been assumed to be a much more common practice than is generally admitted. Under this act "medical practitioners must not receive commissions from tradespeople in return for recommending their wares, or from a dentist for recommending patients; nor are they allowed to pay commissions to hotel proprietors, boarding-house keepers, nurses, midwives or others for introducing patients. A consultant must not share his fee with the medical attendant. No medical practitioner may receive a commission for any service where his whole duty is to his patient, from whom alone he should accept remuneration."

It is to be hoped that these provisions are more prospective than retrospective. It would be sad to think that such practices would be common enough to demand legislative action among Anglosaxon peoples. They assume a degree of degradation of a noble profession hard to believe.

It is doubtless true that a contract between a physician and druggist or other tradespeople whereby a commission is given or asked is illegal and against public policy. Should a physician send all his prescriptions to a neighboring drugstore and get 15, 20 or 25 percent on them, he will be tempted to prescribe more often than is necessary, in greater dilutions and in doses of larger bulk. It is an easy trick for the physician to make his prescription business four or

eight times more profitable to the druggist than necessary. Take Fowler's solution of arsenic, for example, which costs wholesale about thirty cents a pint. One ounce of this will go nicely into the vest pocket, and three drops three times a day will last nearly two months. Dilute this with water till the same three drops are contained in a tablespoonful, and a four-ounce bottle will cost probably three times as much and will not last three days. Figure up the difference in the cost to the patient if he takes it two months. I will cite the case of a woman who took her child to one of these commission doctors. Her medicine bill should have been a quarter or fifty cents. It was \$3.60. Her husband gets ten dollars per week.

[Graft of all kinds, within our profession as well as outside of it, can not be too strongly condemned. Druggists bidding with the doctors for prescription business, and doctors taking their "rake off," are alike a nauseant spectacle.]

On one point we do not agree with Dr. McKee: that in the large cities "there are so many reliable pharmacists" that the physician can safely let his prescriptions go to any of them, and that partiality is unjust. It is true that there are many reliable druggists in our large cities, but there are also lots of "cheap skates"—more proportionately, we believe, than in the town of moderate size—and after the prescription leaves the physician's hands he has no way of knowing whether it will go to the trustworthy or the untrustworthy man for dispensing. That is one of the reasons which have led and are leading so many physicians to the dispensing of their own remedies.

Never lose sight of one thing: the patient's interest should come first. And first, as concerns the patient stands the desire for relief or cure. Therefore, in selecting his remedies the physician should assure himself that the patient is getting the best things procurable for his case. Next comes the patient's financial, or his social welfare; therefore, he should be spared every needless expense.—ED.]



## THE TECHNIC OF TONSILLECTOMY

A sequel to "The Tonsil from the Modern Viewpoint", which appeared in the February, 1908, number of this journal, being the detailed technic for complete removal of the tonsil

By GEORGE L. RICHARDS, M. D., Fall River, Massachusetts

Associate Editor of the *Annals of Otolaryngology and Rhinology*; Otolaryngologist and Laryngologist to the Union and St. Anne's Hospitals

THE decision as to anesthesia whether it should be local, that is, the use of cocaine or some of its congeners, or general, that is, ether or chloroform, will depend upon the age and nervous control of the patient and the condition of the tonsil to be removed. Tonsillectomy is more painful than tonsillotomy and requires complete separation of the tonsillar borders from its attachment to the anterior and posterior pillars, and when the tonsil is small and submerged the operation is painful even under cocaine anesthesia. When the tonsil is large and can be readily drawn out into the throat so that the ring of the tonsillotome or snare can be readily brought behind it, then cocaine anesthesia will answer very well if the patient is old enough to have good self-control. For young children and for most patients I prefer general anesthesia.

### *Method of Inducing Local Anesthesia*

For local anesthesia I apply first 4- and then 20-percent cocaine solution directly to the surface of the tonsil and then inject all around the borders and into the substance of the tonsil a solution made by dissolving 1-5 grain of cocaine, 1-40 grain of morphine, and 1-5 grain of sodium chloride in 1 dram of sterile water. This comes in the form of a hypodermic tablet labeled "local anes-

thesia, strong," and is known as the so-called Schleich tablet. One-half of the solution is used for each tonsil and the injection is made in a number of places.

For general anesthesia ether is used. Young children are held in the arms of a nurse and the adult after being anesthetized in the horizontal position is made to sit in the chair and as near as possible in the upright position, the operator sitting before the patient and using either artificial light or having the patient face good daylight. Complete anesthesia, and not partial, is needed.

### *The Instruments Employed*

A good mouth-gag which will maintain itself in position; a right-angle tongue-depressor; vulsellum forceps which will hold the tonsillar tissue without tearing it. Finding nothing really suitable for this purpose among the surgical instruments in use I have devised, and V. Mueller & Company of Chicago have made, a tonsil vulsellum which obviates most of the difficulties which I have had with the old type of fork vulsella. This instrument is so made that the ring of the cutting instrument or snare can be passed over its handle after the tonsil has been firmly grasped and the jaws hold the tonsil and do not

tear out. Two or three long artery forceps to which pledgets of gauze are attached are required, a small dish of peroxide of hydrogen and the instrument which severs the tonsil from its bed. The choice of this is really immaterial, as the McKenzie or Mattieu cutting instruments or the snare answer equally well; although if the Mattieu instrument is used it is preferable to file off the forks, since they are of no use and are rather in the way.

#### *Dissecting Out the Tonsil*

A double-curved knife, that of Robertson, may be used, to separate the attachment of the tonsil border from the anterior and posterior pillars, but what I usually use without any cutting instrument and always to follow the first cut with the separator is the index finger of the left hand, the nail of which projects slightly beyond the tip of the finger and which has been scrupulously cleaned, scraped, sterilized and soaked in bichloride of mercury solution previous to the operation. The finger is inserted between the pillar and the tonsil, separating the attachment between them. With very little pressure it can be made to find its way upward, toward the point where the anterior and posterior pillars join, then downward posteriorly, and then is carried round and round the tonsillar border anteriorly and posteriorly until it is felt on the finger-tip that the tonsil is being shelled out from its bed as one would separate an orange from its peel. When the tonsil is sufficiently free the tonsil vulsellum is attached and locked in position, traction is made on this with the other hand and the dissecting process is continued until the tonsil is very nearly separated from its attachments. We are now ready to cut it off.

#### *Cutting the Tonsil Off*

The vulsellum being firmly retracted so much so that it is possible to bring the tonsil into the middle of the throat, the cutting instrument is now applied over the vulsellum and over the tonsil until it is completely behind it, when the attachment of the tonsil to the adjacent connective

tissue is cut through. If an ordinary vulsellum is used, the ring of the instrument is placed against the tonsil and then with the vulsellum the tonsil is drawn through the ring. The cutting instrument is then used in the manner described. A hole remains, bounded anteriorly by the anterior pillar and posteriorly by the posterior pillar and externally by the fasciæ of the muscles of the neck. Into this hole the forceps holding a good-sized-gauze sponge soaked in hydrogen peroxide is inserted and held there for a few moments while some more of the anesthetic is given. The hemorrhage is usually slight and easily stopped in this manner.

The removed tonsil is next examined to see if it has been removed thoroughly. If so, its outer or external surface will have a thin membranous capsule and it will be impossible to pass a probe or any other instrument through the crypts, as the probe will come up and stop against this capsule.

The hemorrhage having stopped, the cavity from which the tonsil has been removed is examined not only by inspection but also with the finger to see if any portion of the gland has been left. It will not infrequently be found that though nothing visible remains a small portion of the apex of the tonsil will be left behind. If so, this is grasped with the vulsellum and removed as before. The hemorrhage as a rule is slight unless either the anterior or posterior pillar has been wounded. Care must be taken not to wound this when applying the cutting instrument and also not to engage the tip of the uvula.

#### *To Control Troublesome Hemorrhage*

Should troublesome hemorrhage occur it would be easy to stitch the two pillars together over a piece of gauze, but this I have never had to do. Should this be necessary in an emergency, an ordinary needle and thread could be prepared, while pressure was being made with the gauze on the forceps and a piece of gauze placed between the pillars and then sutured. The gauze should be left in place two or three days and then removed and the suture cut.

The technic of removal of the opposite side is exactly the same.

In many cases the dissection and removal of the tonsil in this way is easy, but when one has to deal with old, fibrous, chronically diseased tonsils the operation is extremely difficult, as after separation of their peripheral attachments they sink behind the pillars in such a way that it is sometimes very hard to remove them.

The throat is very sore after tonsillectomy. The hole left seems very large and the beginner is prone to think he has taken out altogether too much. This, however, is not the case, if the operation has been done as described. Rest in bed, light diet, and a week from business complete the cure, the recovery taking three or four days longer than after tonsillotomy, but the operation has to be done but once.

## THE SURGICAL TREATMENT OF IMPOTENCY

The various causes of impotency and the methods of treating it, both psychical, medical and surgical; with a brief description of the surgical procedures

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Professor of the Surgical Diseases of the Genitourinary Tract, Medical Department of the University of Illinois

THE treatment of impotency is, in general, unsatisfactory. To the general practitioner the condition is usually either a *bête noir* or a huge joke. The patient is agreed as to the first proposition, but hard to convert to the ideas of the jocular medical person who waves away the applicant for succor with a merry, "Why, you're all right." The patient, being painfully conscious of his inability to consummate the sexual act quite naturally is skeptical and hies him to the quack for consolation.

### "Quacked" into Psychopathia

Unfortunately the patient has been quacked into psychopathia in the majority of instances before he consults a reputable practitioner. He is now frequently in a helpless condition. Had he consulted a sensible, conscientious physician at the outset, a cure might have been a simple matter. A little attention to sexual hygiene, measures to allay sexual irritability, nerve tonics, education in sexual physiology, and mental suggestions would have yielded satisfactory results. In many cases, however, simple measures are ineffective from the beginning because of organic conditions. Imperfect sexual development, defective circulation,

inflammatory or strictly surgical conditions are often responsible for the impotency.

Briefly, cases of impotency may be divided into: (a) Psychopathic; (b) those due to mechanical organic impediments; (c) asthenic, as from exhausting diseases of various kinds; (d) neuropathic, from cerebrospinal diseases; (e) cases due to local inflammation from sexual abuse, infection or trauma. A large proportion of the cases are of a strictly medical character and do not come within the scope of this article.

### Treatment of Psychopathic Impotency

In the psychopathic forms of impotency surgical treatment of some kind is often required, and is effective either by the profound impression produced on the patient's mind and the resultant acquirement of confidence or through a temporary nervous and circulatory stimulation followed by erections, the occurrence of which relieves the patient's mind of all doubts as to his sexual capacity. With a return of confidence, permanent relief is here the rule.

In my opinion the view that local, more or less radical, treatment is unwarranted where the impotency is distinctly psychopathic is illogical. The patient is not satis-

fied with a diagnosis; he wants relief, and the end justifies the means. Certainly failure to cure is not likely to make a bad matter worse. Impotentia coeundi due to deformities, congenital or acquired, of the penis, obviously demands surgical interference. Some of my most satisfactory cases have been those in which congenital defects, such as moderate degrees of hypospadias, have produced impotency.

Just here I wish to warn the practitioner against a favorable prognosis in those cases of impotency due to chronic inflammation of the corpora cavernosa occurring in men past middle life. Excision of the plaques of induration is followed by a cicatrix, which, save under very exceptional circumstances, is likely to perpetuate the erectile deformity.

Another point regarding impotency in general is that before deciding on the course to pursue, it is sometimes advisable to examine the wife. Some condition may exist in her which prevents intromission and suggests to the mind of the ignorant husband impotency on his own part. Matrimonial "misfits," so to speak, are responsible for many cases of sexual disquiet. I have met with numerous unfortunate but nevertheless somewhat amusing cases of this sort. Masturbation not infrequently causes a relaxed, hyperesthetic condition of the sexual organs which leads to impotency, more especially if the patient has perused quack literature and become frightened by the awful results of masturbation therein depicted. The hyperesthesia is especially marked in the nerves of sexual sensibility on the floor of the prostatic urethra. Nocturnal pollutions and premature ejaculations are frequent concomitants. Gonorrhea often localizes itself in the deep urethra and produces impotence.

In the case both of masturbatory hyperesthesia and gonorrheal inflammation judicious local and general treatment is usually effective, but in many cases something more radical is required.

In general the surgical measures of relief may be divided into:

(a) Operations for the relief of deformities—mechanical impedimenta, or such

conditions as varicocoe—which act detrimentally upon the patient's mind and also derange the circulation of the sexual organs.

(b) Ligation or resection of the vasa deferentia for the purpose of putting the prostatic urethra, seminal vesicles, at rest, thus lessening sexual reflexes; and further, in some cases, to stop frequent nocturnal pollutions. This cutting off of the seminal circulation need be only temporary. I have devised a systematic method of rejoining the severed ends of the vas which forms a perfect anastomosis, and which can be performed at any time the surgeon may elect.

(c) Ligation, or better, resection of the vena dorsalis penis. When properly done this operation is successful in a fair proportion of cases. It acts in two ways, viz.: (1) by increasing the circulation of the penis, and (2) obviously by its psychologic effect. The circulatory effect of the operation is easily demonstrable—the psychic effect may be inferred. Naturally, an immediate increase in the bulk of the penis with more frequent and vigorous erections, arouses the patient's confidence in his sexual capacity. The operation should be carefully done and the patient put to bed for a few days. I wish to reiterate what I have often said elsewhere, viz, ligation or resection of the dorsal cutaneous vein is not ligation or resection of the dorsal vein of the penis. The latter is a delicate operation and requires skill and anatomic knowledge for its proper performance. The dorsal vein lies within the fascia propria of the penis. The veriest tyro can ligate the cutaneous veins.

(d) Perineourethrotomy and dilation of the prostatic urethra. This offers relief from such underlying conditions as hyperesthesia of the deep urethra, stricture and infected posterior urethra and prostate. This operation is in my opinion performed for the relief of impotency less often than it should be.

Whatever surgical measure is undertaken for the relief of impotency, too much should not be promised. Care, however, should be taken not to give the patient a gloomy view of his case. The psychic aspect of the case should always be borne in mind.



# TREATMENT OF PITYRIASIS CAPITIS

The most frequent cause of baldness: The initial and later symptoms of this condition, and how to treat it with the best results

By J. PHILLIP KANOKY, M. D., Kansas City, Missouri

Professor of Dermatology, University Medical College, Kansas City

**S**EBORRHEIC dermatitis of the scalp gives rise to baldness more frequently than any other one cause, if heredity be excepted. In a clinical study, based on 300 cases, Jackson found a seborrhea of the scalp in 72 percent, and Elliott, in a series of 346 patients, attributed over 90 percent to this one disease.

The affection is a chronic one, commencing early in life, as a rule, and males are attacked more frequently than females.

## *The Early Symptoms of the Disease*

The initial symptoms are a dryness and scaliness of the scalp, associated with a slight pruritus at times. Later, this branny desquamation becomes more pronounced and the hair on the affected surface becomes loose and tends to fall out when a comb or brush is used. The shafts are brittle, harsh and dry and the new hairs which come in seldom develop much beyond the lanugo stage.

The etiology is still in dispute. Unna claims that his monococcus is the causative agent, Sabouraud insists that a seborrheal microbacillus is the principal etiologic factor, while an American observer, Parker, of Detroit, would have us believe that the fault lies in deficient respiratory elimination and that a soluble poison, trichotoxin, circulates in the blood and gives rise to a follicular toxemia with resulting atrophy and death of the hair-papillæ.

## *Treatment of the Early Stage*

The character of the treatment in these cases should vary with the stage of the disease. If, when first seen, the hair is thick, heavy and oily, the skin being covered with a considerable layer of greasy epithelial

scales, I order a thorough shampoo once weekly, using either Hebra's soap spirit or the ordinary German soft soap. The head must be rinsed afterward in warm water and the hair and scalp carefully dried with a bath towel.



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A few drops of the following mixture is then applied with a medicine dropper and rubbed in well:

Chloral hydratis.....	10.0
Glycerini .....	(1.0 to) 5.0
Aquæ rosæ .....	50.0
Aquæ dest., q. s. ad .....	200.0

In decided brunettes the proportion of chloral may often be increased to advantage. After a few weeks the head may be washed less frequently and the solution applied only every second or third evening.

This simple procedure alone will often suffice to eradicate the disease in the slighter degrees of involvement.

*When there is Considerable Hair-Loss*

If considerable hair-loss has already taken place, treatment more tonic in character is indicated.

Here, commonly, there is not so much dandruff, but the hair which formerly covered the vertex and supratemporal areas has been largely replaced by a sparse, silky lanugo-growth. The best results can be secured by the regular and conscientious application of

Liq. potassii arsenitis.....	4.0
Pilocarpinæ.....	0.6
Tinct. cantharidis.....	25.0
Ol. ricini.....	12.0
Glycerini .....	8.0
Alcoholis, q. s. ad.....	300.0

Directions: Shake well and rub a small amount into the scalp at bed-hour.

This may at times be alternated with a sulphur-vaseline preparation:

Sulphuris præcipitati..... 4.0

Vaselini, q. s. ad.....30.0

Directions: Apply at night, using considerable friction.

As a rule patients object to these greasy mixtures, however, and it is best to employ lotions, if possible.

Internally, I have found the calcium-sulphide granules (Gm. 0.01), one every two or three hours, or ichthalbin (Gm. 0.3), one tablet after each meal, beneficial.

A well-ventilated, light-weight, loosely fitting hat should be worn, and plenty of sunlight and exercise in the open air are to be recommended.

Some of the various types of incandescent lamps now advertised so extensively often prove of material service in treating this condition. I have secured especially pleasing results by the use of chromotherapy. The different therapeutic values of the various colors of the spectrum can be readily appreciated by a thorough and intelligent trial, and nowhere are they of greater value than in dermatology.

## PRIMARY CANCER OF THE VAGINA

The description of a case of this rather rare disease, epithelioma of the vagina, occurring in a negress. Operation not performed

By EMORY LANPHEAR, M. D., St. Louis, Missouri

Professor of Surgery in the Hippocratean College of Medicine

**P** RIMARY cancer of the vagina is sufficiently rare to make the following case worthy of record.

Mrs. Lizzie G., negress, age 40 years, patient of Dr. Robt. H. Finley, examined in consultation, Dec. 21, 1907. First menstruation at 11 without trouble. Married at 22, four children, youngest at 35; no miscarriages, no pelvic infection. Always well (washerwoman) until about five months ago when she flowed too freely at menstrual period and had a little discharge afterward. There has been no pain, but for the past three months a daily discharge of blood,

with recently a bad odor. Past week enough hemorrhage to confine her to bed from weakness.

Examination showed a huge ulcer of the right side of the vagina, beginning about one inch from the labium majus, covered with large masses of granulations (cauliflower growth) bleeding on touch. Posteriorly invasion of the mucous membrane was easily traceable across to opposite side where a second, smaller ulceration was found with similar granulations.

The uterus was normal, freely moveable and had no sign of involvement though there

was laceration of the cervix with its usual "granular" or "eroded" mucous membrane. The bladder was also not involved.

Macroscopic examination seemed to indicate tuberculosis rather than either condy-

loma or carcinoma; but microscopic examination showed the trouble to be pure epithelioma.

Operation was advised and rejected, and the patient passed into other hands.

## ELECTROCAUTERY TECHNIC

The prejudice against the electrocautery and why it exists. A description of the apparatus which may be employed and the technic which the author has found best

By EMMET L. SMITH, M. D., Chicago, Illinois

THE electrocautery has a place for use in nose- and throat-work. It is not only useful, when indicated, but it is a valuable means and easily used when one understands the anatomy, pathology and technic. However, the point, when indicated, may cause some discussion. One may have had certain cases in his own practice where he would not now use this means as freely as formerly, but nevertheless there are cases presenting now where the electrocautery may be used with decided benefit. The fact that its use has been abused in times past is no reason for dropping it entirely.

### *Why Prejudice Against the Electrocautery*

Much of the prejudice today against the use of the electrocautery is due to the fact that in former times some operators cauterized everything within reach. It was used in unsuitable cases, with improper degree of heat, imperfect apparatus and generally too much used. Conservative methods are always the most satisfactory. The electrocautery has a place and can be used with good results. Many doctors who have the electrical energy within reach from the street current are neglecting its use. Many others would take it up if they only knew how easily it can be handled and the good results it gives.

Many who take this up, or desire to, often are unable to find any help in the textbooks although these should contain minute direc-

tions as to its use. Through the lack of this the beginner is liable to start wrong or the experience may prove undesirable. The object of this article is to give some details which may be useful and allow the operator to proceed with confidence and satisfac-



DR. EMMET L. SMITH

tion to the patient. Those not familiar with the effect of the cautery point should first experiment with some animal tissue.

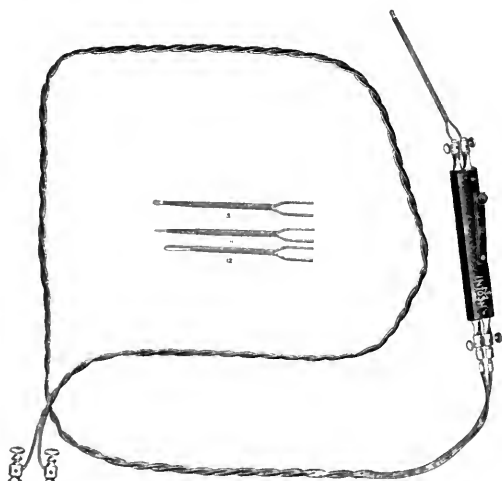
A very large amount of amperage, or volume of current, is necessary for the heating of platinum cautery-points and knives, usually from 15 to 35 amperes being re-

quired; although only a very low voltage is needed, the usual pressure being about 4 to 6 volts.

### *The Apparatus Necessary*

This electrical energy may be obtained in several ways. If one has the street current in the office, that can be used; and if it is a direct current, he will need a motor transformer; if it is an alternating current, then either an induction transformer or a wall-plate having a cautery transformer. With the direct current a small storage battery can be charged by means of a Vetter current tap.

Where the street current is not available, a storage battery or a fluid cautery battery can be made use of. When using the current from a storage or other battery, or in any manner where it is necessary to economize the current, it is advisable that the distance from the source to the heating point should be as short as possible. With each method of obtaining electrical energy the volume can be regulated. The transformers and storage cells have regulating switches and with the storage battery more or less resistance can be placed in circuit with the cautery knife.



CAUTERY HANDLE AND CONNECTION

The cautery handle and cords should not be cumbersome, but should be such as can be handled delicately. For the

cautery handle the one here illustrated made of black fiber has been very satisfactory. Heavy conducting cords of large capacity are required to carry the current to the cautery handle, as the light conducting cords furnished with ordinary batteries will not suffice. The electrodes such as are generally used are illustrated herewith.

The degree of heat of the platinum point is important. The cherry-red is generally used. The object is to pin the mucous membrane down to the periosteum with the edge of the electrode, with the least amount of cicatricial tissue. If hypersensitive areas are to be destroyed, then use the electrode flat with white-heat and make a superficial burn. When the platinum point comes in contact with the tissues it will be noticed that it lowers the heating point. Therefore if a large area is to be treated it will be necessary to go in with a higher point of heat than is needed to use.

### *The Technic to be Used*

After selecting an electrode to fit the pathological condition, place the platinum surface on the tissue, but do not press the closing button while the electrode is still. Just before pressing the button to heat the platinum wire, start a gentle to-and-fro motion over the area to be treated. Do not stop with the current on as it will adhere and break the eschar and bleed. Remove the platinum point before the heat is turned off. Care should be taken not to allow the cautery point to come in contact with two opposite surfaces, as they would be very likely to adhere and form a troublesome synechia. This can be avoided by using an electrode where one part is wrapped. When possible, treat only one location at a time. Keep the area well cleaned out with any good alkaline solution and hydrogen peroxide (1 in 5), and the crusts will come off in a week to ten days.

### *Special Considerations*

Owing to the anatomical structure, the application of the cautery is usually confined to the septum and lower turbinal. Its use (if at all) on the middle turbinal should

be with caution. It should be noted that the use of the cautery is not advised on the septum in cases having syphilis or tuberculosis.

It can be used in various ways in the nose and throat and the surface to be cauterized is first cleaned thoroughly with an alkaline solution and dried with cotton. Note the pathological condition and the object to be accomplished. Anesthetize the area selected and also place a small amount where the electrode is liable to touch accidentally. Apply a 5- to 20-percent solution of cocaine hydrochloride on cotton so that it covers the area. Change twice and massage the area with the same solution with cotton on the probe. This will take fifteen to thirty minutes, according to the strength of cocaine solution used.

Take time for this work and with care there is no need of hurting the patient in doing this work. A reputation for painless treatments pays for the extra time and care. It is best to get familiar with using a certain strength of cocaine solution. Some dry cotton can be placed beneath the area to be anesthetized to absorb all that runs down. In certain cases it is better to have the cocaine in the cotton rather than in some sensitive patient. The area is dried again so as not to produce steam when the platinum wire is heated. This line of treatment is not advocated for all diseases of the nose and throat, but I desire to direct attention to its proper use in nasal obstruction from hypertrophic and tumescent rhinitis. It is in these cases that it gives excellent results.

## LUES: THE MOST PROTEAN OF DISEASES

One of the "Informal Chats with the General Practitioner", in this number discussing the internal treatment of syphilis with different forms of mercury

By WILLIAM J. ROBINSON, M. D., New York

Editor of The Critic and Guide, Therapeutic Medicine, Altruria and The American Journal of Urology

HAVING fairly come to the conclusion that mercury is the one indispensable drug in the treatment of syphilis, we will consider the various means and ways of administering the drug. Mercury can be introduced into the system by internal administration per os, by inunction into the epidermis, by intramuscular injections, by intravenous injections, by baths, by vapor-baths, by rectum and by other methods, which we will term miscellaneous.

We will first consider the internal method, not because it is the best, the safest, the surest or the quickest method; it is none of these. We will consider it first because no matter what we may do or say to the contrary, it will, in this country at least, forever remain the method most commonly in use, especially so in the hands of the general practitioner. While in Germany and Austria

the intramuscular and inunction methods are used very largely, and while in Italy the intravenous method is gaining general recognition, England, France and this country stick firmly to the internal mode of employment—and there is a reason for it. The reason will become evident as we discuss the different methods, but the principal advantages of the internal method are its convenience and painlessness.

There are many mercurial compounds for internal administration. The principal ones are as follows, in the order of importance:

*Hydrargyri Iodidum Flavum* (Yellow Mercurous Iodide, Protoiodide of Mercury, Hg I). The dose of this is 1-8 to 1 grain three to four times a day. In exceptional cases, when we know our patient, the dose may be increased to 2 grains per dose. This is one of the best and mildest preparations of

mercury for internal administration, and may be given longer than other mercurials (with the exception of the tannate) without disagreeable by-effects. It is best administered alone in pill or tablet form. On account of the habit of physicians of administering mercury with iodides in the same pill or mixture, it is important to remember that this mercurous iodide must *not* be administered in conjunction with potassium iodide or any other iodide. The reason is the resulting formation of the much more toxic (red) mercuric iodide. The following equation shows the reaction:

$KI$  plus  $2\ HgI$  equals  $HgI_2$  plus  $Hg$  plus  $KI$ .

It is well to know that this salt was formerly known as the green iodide of mercury and is even now occasionally prescribed as *hydrargyri iodidum viride*. The reason for the difference in color and name is a difference in the method of preparation. According to the process of the Pharmacopeia of 1880 the mercurous iodide was made by rubbing mercury and iodine together; the resulting product had a greenish color.

*Hydrargyri Iodidum Rubrum* (Red Mercuric Iodide.  $HgI_2$ ).—The dose of this is 1-32 to 1-8 grain. This is a more energetic compound than the previous one—all mercuric compounds are more potent than the corresponding mercurous salts—and I like to use it for short periods to “change off” from other mercurials. As a matter of fact, we shall always achieve best results by not limiting ourselves to one salt, but by changing off every month or two.

*Hydrargyri Chloridum Corrosivum* (Corrosive Mercuric Chloride, Bichloride or Perchloride of Mercury, Corrosive Sublimate).—The dose of this salt in the treatment of syphilis is 1-100 to 1-8 and occasionally 1-4 grain. Some claim to get good results from the corrosive mercuric chloride. We do not like it. It is too hard on the gastric mucous membrane, and gastrointestinal disturbances, such as diarrhea and colic, result from it much more frequently than from the iodides. In old sluggish cases where the disease is apparently quiescent but the patient needs “building up,” it

is an eligible preparation in 1-60-grain doses.

*Hydrargyri Chloridum Mite* (Calomel), *Hydrargyri Oxidum Rubrum* (Red Precipitate) and *Hydrargyri Oxidum Flavum* are used to a limited extent in the internal treatment of syphilis; but by us they have been entirely discarded. They are inferior to the others—and why use inferior when superior preparations are available?

*Hydrargyrum cum Creta* (Mercury with Chalk, Gray Powder).—This preparation contains 38 percent of metallic mercury and is the only preparation of elementary mercury available for internal use. It is a great favorite of the great English syphilographer, Jonathan Hutchinson, and while particularly serviceable in infants, the subjects of syphilis congenita, it is also valuable in adults. Hutchinson generally combines the mercury with chalk with small doses of opium, and in this combination it may be given for long periods without causing any gastrointestinal disturbance.

*Hydrargyri Tannas* (Tannate of Mercury).—This preparation of mercury is non-official, but is none the less exceedingly useful. It is a very mild preparation and is very well borne by the stomach. We have had a number of patients who had become intolerant to the iodides and chlorides of mercury, but who could take the tannate with impunity. The dose of the tannate is 1-4 to 1 grain three to four times a day. Occasionally the dose may be increased to 2 grains.

Another nonofficial preparation is arsenauo, a solution of the bromides of gold and arsenic, containing 1-32 grain of each element in 10 drops of the solution. The dose is 10 to 30 drops, three to four times a day, in water. This is a very valuable preparation, combining the alterative properties of arsenic with the specific properties of mercury.

The salicylate of mercury and the succinimide of mercury are good salts, but possess no advantages and I have never found any reason for using them internally. They are very valuable compounds for intramuscular injections, but of this we will speak in another chat.

# A PECULIAR CASE OF THE PUERPERIUM

The history of a late and fatal complication of the puerperal state, associated with brain defects, paralyses and final coma, ending in death

By ROBERT J. ALLEN, M. D., Centralia, Oklahoma

THE following case-history presents so many peculiar features that I believe it merits a place in the literature of the complications of pregnancy.

Examination was made April 29, 1905, when the following facts were brought out: Mrs. M. was confined in February, 1905. She had a somewhat prolonged and difficult labor, at term, but was finally delivered of a nine-pound girl; there was a convulsion just prior to the birth of the child. (I was unable to get the history of her accouchement from the attending physician, so had to depend upon the statements of herself and husband.) There was nothing peculiar about her condition following delivery, so far as could be ascertained, but the patient had been able to leave her bed only once between the time of her delivery and my examination. At that time she walked, with assistance, to the garden a short distance from the house, on her return she was "struck" (as she expressed it) by a sharp pain in the temporal region, followed by a sensation of brow-band, which persisted as a constriction entirely encircling the head. Associated with this there was a general prostration so serious as to prevent her getting up.

At examination I found her temperature 97.4°F., pulse 64 and weak, respiration 22. The urine was scant, with specific gravity 1040, containing no sugar, but much albumin and some blood. The bowels were constipated as she was under the influence of morphine and had been for a considerable time, not so much for pain as for the persistent insomnia. Her appetite was poor and general condition not good.

## *A Strange Desire to Whistle*

There was practically no change in her condition, even under active treatment, until

May 10, when I was hurriedly called. I found her in about her usual condition, except that she was very restless. She had had another convulsion which had continued for several minutes but left her suddenly, without any peculiar after-effect on either mind or body except the strange desire to whistle: she would sit up in bed and whistle for hours, until finally persuaded by the attendant to lie down and remain quiet according to instructions.

Everything went well except this. Her appetite improved, she slept better, the pain was relieved and the albumin almost disappeared. On the 13th I was again hurriedly called and found her affected with complete motor paralysis of the right hand and the arm to the elbow; but there was no tendency to coma. On the night of the 13th, however, I was once more summoned, as she could not be awakened, the family thinking I had given her too large a dose of some hypnotic, which I had not. In the morning she aroused somewhat, but from this time on she would fall into complete coma for variable periods. Associated with this there would be the local paralysis, the left pupil would dilate, there was inability to swallow even water, associated with deep, sonorous respiration. In about ten or twelve hours she would regain consciousness, together with all her lost faculties.

She continued in this variable state until May 20, the albumin entirely disappearing. At that time she passed out of my control.

## *A Fatal Ending*

She never got up, but died in the following August. The then-attending physician pronounced the cause of death to be uremic poisoning, she having died in one of the periods of coma. With this diagnosis I

have never been quite satisfied, as it has seemed to me to more closely resemble symptoms due to some local trouble in the right side of the brain.

[This is an interesting case. We submit this report without comment, leaving the discussion of the same to our readers. What was the matter with this woman?—ED.]

## A CASE OF HEMOPHILIA NEONATORUM

In which fatal hemorrhage followed an ordinary operation for phimosis performed upon a new-born infant, it being found impossible to control the loss of blood

By J. R. HARRIS, M. D., Fort Worden, Washington

Captain and Assistant-Surgeon, United States Army

ABOUT the middle of November last I was called to see a multipara who expected to be confined with the seventh child in a few days. Her health had been good, but she complained that she had not felt so well as with previous pregnancies and thought she was running over her time. Examination showed nothing unusual; the fetal position could not be made out; anterior implantation of placenta found afterward. Family history good, no history of "bleeders" on either side. (This point was brought out later.) All other children healthy; three boys.

### *The Mother's Confinement*

From the 18th there was given 1-6 grain of caulophyllin, t. i. d., for irregular false pains, with good result. Labor-pains began about 5 a. m., November 25. She was seen at 8:30, and examination showed cervix very soft and almost fully dilated but no engagement; membranes intact. Pains not very strong and not regular. Quinine, 0.25 Gram, was ordered at hour-intervals, given at 9 and 10 a. m. About 10 o'clock I saw her again, made an examination, and could not make out the presentation without rupturing the bag of waters which now filled the vagina; no engagement. One tablet of the hyoscine-morphine-cactin compound was given per os. Reexamination disclosed a breech-presentation, hips anterior and caught on the os pubis, the re-

traction ring well formed; prolapsus funis present.

After consultation with Dr. E. H. Porter, who was sent for, it was decided to do combined cephalic version, since some interference was necessary. This was done, and the head left in R. O. A. engagement by pressure from without. As soon as the anesthetic effect began to wear off pains began and the birth progressed nicely, the mother practically asleep between pains, till the head was born, when she said she could do no more, and the child was held for a moment. Freeing the posterior shoulder, the child was quickly extracted, but did not breathe. The lungs were expanded by blowing with the mouth over the child's nose and mouth, and breathing started by pressure. After two more repetitions of the expansion it gasped and began to breathe. I left with everything completed at 12:30 p. m.

### *Circumcision Followed by Fatal Hemorrhage*

The child was comfortable that afternoon, but cried all night, as I learned in the morning. At this time I examined him for the cause and found phimosis which almost occluded the meatus. There was priapism, which seemed to be the cause of the child's actions. Circumcision was performed, the prepuce was completely adherent, except for about a millimeter from



the meatus. On stripping this back, a small abrasion was made on the frenum close to the meatus. The priapism ceased immediately, and the child fell asleep while being dressed; there was no appreciable oozing.

The child began to cry in the afternoon, and the nurse sent for me at 6:30. The dressings, clothes and bed were soaked in blood. After an hour of effort, including the free use of tannic acid and horsehair-suture of the oozing area, the bleeding ceased. Afterward I found it ceased when the child fell asleep, exhausted from loss of blood and his efforts.

The morning of the 27th found the bed soaked with blood underneath the child. Another effort, including adrenalin, tannic acid, tincture of iron, actual cautery of the scratch on the frenum, with more extensive

suturing, was made, but the sutures only made new bleeding-points.

Meanwhile the child had been given gelatin water internally at intervals all night, with calcium chloride and enemas of the chloride solution. That night I tried the tannic acid and antipyrin mixture locally, but while it stopped the oozing for some time, it started again in the night. The 28th was a repetition of the above. The child died the 29th early in the morning.

The blood had at no time any tendency to coagulate, soaking freely into the dressings even when these were saturated with tannic acid or other astringents. The bleeding apparently started after each dressing, when the child, strengthened by rest and nourishment, found energy to start crying again, the raised pressure would then open up the collapsed vessels.

## ❖ SURGICAL THERAPEUTICS ❖

### UNMIXED TUBERCULOUS DISEASE

Those who obtained their knowledge of surgical tuberculosis some years ago cannot, unless they have closely followed the literature of the subject, realize the advance which has been made in the way of treatment within the last decade. It is now clear that the principles of treatment which apply to a case of pure tuberculous disease are very different from those suitable to a case of mixed infection, and the prognosis of the case is profoundly affected adversely when a secondary pyogenic infection has been added to the tuberculous lesion. Tuberculosis of the bone or joint, for example, is curable in the great majority of cases; but after sinuses have formed and the bone or joint has become infected with the bacteria of pus the case must rapidly drift into the incurable class, with the prospect of the eventual onset of amyloid disease. It is clearly, therefore, of the highest importance to be careful in these cases that no one touch a joint not already the site of mixed in-

fection unless he be absolutely familiar with every phase of the aseptic technic; for otherwise operative measures lead to a mixed infection, and thus contribute to the production of a condition far more serious than that for which they were undertaken.

### PEPTIC ULCER AFTER GASTRO-ENTEROSTOMY

In recommending gastrojejunostomy for relief of certain diseases of the stomach, excepting carcinoma, the surgeon should always bear in mind that peptic ulcer may follow the operation. Gossett collected statistics of 31 ulcers (known) following gastroenterostomy, developing all the way in from ten hours to seven years. The treatment is the same as for other forms of gastric ulcer: excision before perforation can occur.

### TRAUMA AND APPENDICITIS

The question is often asked, and sometimes in court, "can a blow in the region of

the appendix cause an attack of appendicitis?" As a broad rule it may be said that with a person whose appendix is healthy and contains no foreign bodies a blow upon the abdomen or a violent effort will but rarely cause appendicitis. In case of there having been a not remote appendicitis, not operated upon, a blow upon the abdomen, even at a distance from the cecal region, may relight a latent inflammation, and result in perforation of the appendix and danger to life. Even a violent effort, a fall, or a strain may tear up adhesions or the wall of the appendix itself, and result in perforation. The same thing is true of a case in which an appendical abscess has been opened but the stump of the appendix not found for ligation or inversion, even though the wound may have been healed for a long time. The French law now declares as follows: "(1) If the appendicitis caused by the accident is recovered from without operation, the patient can only collect indemnity for the time which is lost. (2) If the accident causes appendicitis and an operation is required and the patient recovers, he can only collect for the loss of his time and the physician's charges. If death should result, the patient's estate could collect damages if it is clear that the traumatism is the cause of death, and if the accident resulted from some cause not connected with the patient's ordinary duties."

#### INCURABLE CANCER OF BLADDER

Some cases of cancer of the bladder, recognized very early, can be benefited by palliative operation. Cabot states that cases appropriate for early palliative operation should show the following favorable conditions: (1) The disease should be in a comparatively early stage, though the location or depth of infiltration make radical cure impossible. (2) Infection of the bladder must be absent or trivial. (3) Infection of the upper urinary tract must be absent. (4) Cases in which the disease is known to have extended beyond the limits of the bladder and involved the lymphatic glands will not be benefited. Most surgeons agree on the following conclusions:

(1) That palliative operation is of value in the treatment of cancer of the bladder. (2) That in properly selected cases operation will prolong comfortable existence very materially. (3) That suprapubic drainage of the bladder will relieve the symptoms and promote the comfort of patients for whom nothing more radical can be done. (4) That hemorrhage should not be allowed to continue unless efficient examination has conclusively shown that its cause cannot be removed by operation.

#### SUPPOSITORIES FOR PROSTATITIS

The formula of "our" favorite suppositories for prostatitis is as follows:

Ichthyol .....	grs. 3	
Methylene-blue.....	gr. 1	
Morphine sulphate ...	gr. 1-4	
Atropine sulphate.....	gr. 1-150	
Iodoform .....	gr. 1-2	1
Cacao butter .....	grs. 20	

Make one suppository. Use one twice or three times a day.

#### HYOSCINE-MORPHINE ANESTHESIA IN THREE HUNDRED CONFINEMENTS

In *Archiv fuer Gynaekologie* Steffen reports his observations in 300 cases of labor conducted under hyoscine-morphine anesthesia in the hospital at Dresden, Germany. To American doctors inclined to use hyoscine-morphine-cactin in every case, regardless of special contraindications present, the statement is important that in 1335 cases delivered during the year only these 300 were thought suitable for this type of narcosis. All cases of contracted pelvis, as well as all that were considered to be likely to have a prolonged labor, were excluded on account of the, in many cases, slowing of the labor-pains that is found to be the result when given to full surgical anesthesia of the drugs. Besides, on the fetus the morphine may produce arrhythmia of the heart if too large a dose be given, or apnea if it be given close to the end of the second stage of labor.

Morphine alone has been found to have an unfavorable effect on the contractions

when the patient has become exhausted; but the combination with hyoscine presents ideal effects from far smaller doses. [It also seems to antagonize the paralyzing effect of the morphine to a marked degree.—Lanphear.] By giving this combination, a sound sleep of several hours is induced, the patient is rested, and more regular and stronger pains are produced. At first the injections of hyoscine-morphine were given as soon as the regular labor-pains came on, but it was found that the pains thus were inhibited to a greater degree by the drugs, and labor was much prolonged. Injections were then given only at the beginning of the second stage of labor, when the most severe pains are experienced; and that has been found to be the best way by those who are using H-M-C tablets in this country. In favorable cases they make the contractions painless, and these go on more strongly and quietly until delivery is accomplished. The patient has no feeling of pain and no remembrance of the labor, sometimes insisting that she has not been delivered and the child is not hers. The woman is not able to control the abdominal pressure, and it is sometimes very difficult to protect the perineum. On the other hand, pressure on

the abdomen may be necessary to aid expulsion, on account of weakness of the contractions.

The effect on the friends of the patient of the red, congested face, the restlessness that is sometimes seen, and the inability to rouse the patient to natural consciousness is disagreeable, and hence this form of anesthesia is not well adapted to the delivery of cases in private practice unless one has the absolute confidence of the family. Another difficulty is that the people are apt to insist that the physician must be present and ready to give aid during the entire labor, not leaving the patient at any time to the care of the nurse or midwife. The child when delivered sometimes does not cry lustily, and often is sleepy, and even stupid. This passes away in about ten minutes but occasions some anxiety to the obstetrician just beginning its use. Since the action is not uniform (i. e., all patients are not equally susceptible to its influence) it is better to use half the surgical dosage; and every case must be carefully watched. Its use is not adapted to all classes of labor, but it is especially useful in primiparæ with normal pelvis and strong pains, and is of greatest value in hospital practice.

## GYNECOLOGICAL THERAPEUTICS

### VESICAL CALCULUS IN WOMEN

As a rule it may be said that stone in the bladder in women comes from an infection, though not at all infrequently it originates in the deposits of salts around a hairpin or other foreign body; primary calculus being very rare, but when one stone has already formed prevention of another is of extreme importance. This can be done by careful regulation of the diet with the administration of alkaline medication. The idea is to as totally eliminate uric acid as is possible, with such adjuvants as exercise, hydrotherapy and massage. No faith can be placed in the so-called "dissolvents." Surgical

treatment consists in the three methods of (1) dilation of the urethra, (2) cystotomy and (3) lithotripsy. The neck of the bladder may be dilated up to a diameter of 3 cm., so that moderately large calculi may be removed. A dilation up to three-fourths inch is dangerous. Anesthesia is necessary and the meatus may need to be incised.

Cystotomy is the only operative method and may be done either through the vagina, or by the suprapubic route, the first being especially indicated in serious inflammatory lesions where drainage is desired. The phosphatic deposit may be scraped away and irrigation is easily carried out. Suprapubic cystotomy is more difficult in women than

in men but has the advantage of offering a perfect view of the interior of the bladder so that lesions may be directly treated. If the bladder be aseptic the wound may be at once closed—a very rare condition, however. Lithotripsy is a better operation in women than in men, because the calculi need not be reduced to small fragments and the piece may be readily removed through the shorter, wider urethra of the female. Distension of the bladder is not essential to the experienced surgeon. The convalescence requires but two or three days, which gives it advantage over cystotomy. Should any fragments be left behind they are usually expelled spontaneously and frequent irrigation may take the place of drainage in the septic cases.

#### ACROMEGALY AND THE MENSES

After most careful consideration Patellani has reached the conclusion that there is a distinct relation between the sexual function of woman—more particularly her menstruation—and acromegaly, he having analyzed 145 cases thoroughly. He declares that the importance of an altered genital function in acromegaly is demonstrated especially by arrested menstruation.

It is important to distinguish between the cephalic and initial, and paraacromegalic forms. In women the classic form begins with the sexual period, never before puberty or after the menopause. Arrest of menstruation may result from accident, infectious diseases, prolonged lactation and uterine atrophy. The normal menopause may be considered a physiological acromegaly. Regular menstruation excludes acromegaly from consideration. Amenorrhea is not simply a symptom of acromegaly, but bears a causal relation to it. Pregnancy may occur with acromegaly, but lactation will hasten the progress of the disease. Ovulation may continue during the disease.

The amenorrhea may be caused by atrophy of the uterus due to lactation. Lactation in a woman who has had scanty menstruation should be carefully watched. In all cases in which the genitals were ex-

amined in life or after death they were found atrophied or small. The disease occurs especially between the ages of twenty-one and twenty-five. It occurs more frequently in virgins and sterile and sterile married women, and the course is more rapid in them than in other patients. It may be unobserved from one to five years. It favors sterility. Castration is of no therapeutic value.

#### CURE OF PTOSIS OF ABDOMINAL VISCERA

Women who have borne many children are liable to develop an abnormal laxness of the anterior abdominal walls, with downward displacement of the viscera. When no kind of supporter or binder gives relief and the traction on displaced organs becomes unbearable, fixation by suspension may be tried (splenopexy, nephropexy, gastropexy, etc.) or the following procedure may be resorted to: incision, starting a little below the point of the sternum, is carried down to the pubis, and the aponeurosis of the recti is exposed and then dissected to the extent of about one-third of its length. The posterior aspect of the recti is then exposed to the extent of about two centimeters in breadth. A row of continuous chromic catgut sutures is introduced to unite the recti by overlapping them. The excess of the anterior aponeurosis is resected and a second layer of catgut unites this. Then, by an elliptical incision, all the skin that is necessary should be removed and the borders brought together by silkworm-gut sutures.

#### SYPHILITIC CONDYLOMATA OF THE VULVA

During the secondary stage of syphilis condylomata may appear upon the vulva. They may seem as flat, red patches (sometimes gray-white instead), somewhat elevated; soon tending to coalesce and form clusters. They are nearly always associated with similar patches upon the perineum and around the anus. Treatment is entirely, and energetically antisyphilitic: local application of

mercurial ointment well scented (for the discharge is usually very offensive), after thorough cleansing; the hypodermatic injection of mercurial solutions, if permitted—if not, then large doses of mercury internally. If they become very annoying they may be removed by actual cautery or nitric acid under local anesthesia.

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### TOXEMIAS OF PREGNANCY

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Too much attention cannot be paid to the maintenance of normal excretions during the entire period of gestation, for upon retention of certain poisonous substances which should be eliminated depend eclampsia, pernicious vomiting and parenchymatous liver-degeneration—the last-named being a condition as yet not thoroughly understood. While it is generally conceded that there is a toxin in the blood that is responsible for the morbid changes in the liver, little or nothing is known as to its nature or source; the liver-changes themselves are similar to those that may occur under other toxic conditions, the differences being mainly in degree rather than in kind. A peculiarity of this particular manifestation of the toxemia is that the wide-spread destruction of liver-cells does not ordinarily occur, as indicated by clinical symptoms, until after the uterus is emptied, the rapid breakdown then being due, Jordan believes, to the extra task imposed on the already impaired liver by the excess of waste-products from uterine involution.

The first indication of its probable existence is the persistent type of emesis known as "pernicious vomiting," which during the early months may be confused with the benign type due to reflex or neurotic influences, but in the later months its significance is not so likely to be overlooked. Headache and various neuralgic pains are common and epigastric pain (probably due to liver-changes) is especially prominent. Increase of salivary secretion is an important symptom in many bad cases. Air-hunger, mental depression and edema are toxic symptoms preceding the destructive processes in the liver. When the disease has progressed sufficiently far that there is much

destruction of the liver-cells (either before or after delivery) the symptoms are coma and stupor, black vomit, bile in the urine, possibly icterus, convulsions (occasionally), failure of renal function with an increase of ammonia in the urine and failure of circulation. Death usually follows these, though recovery sometimes may occur under vigorous and proper treatment. Palliative measures are valueless—immediate emptying of the uterus must be done as soon as the diagnosis is certain. This must be done without chloroform or ether—spinal anesthesia here seeming to be the ideal method.

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### FOR UTERINE HEMORRHAGE

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In menorrhagia, when the patient will not consent to operative treatment to remove the cause, one may inject pure hydrogen dioxide from a rubber syringe with a long nozzle which must be passed to the fundus. This measure is always attended with uterine colic of more or less severity but it usually subsides in a few minutes. Application of this agent on pledgets of cotton will do no good—the uterine cavity must be well filled to secure hemostatic effect.

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### MORPHINE IN PUERPERAL CONVULSIONS

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In 1885 Dr. C. L. Lackey, of Sweet Springs, Mo., was called to see a woman in the fourteenth convulsion of puerperal eclampsia, antepartum. He injected half a grain of morphine sulphate in each arm and the patient promptly went to sleep. In about one hour she awakened and had another (milder) spasm. A half grain of morphine was injected in one arm. After an hour and ten minutes she had another seizure and another half grain was administered. In a few minutes the respirations indicated for the first time that she was getting the full effect of the drug. At about the same time her pain increased in frequency and force, with the os only slightly dilated. In about three hours dilation was sufficient to permit application of the forceps; an 8-pound boy, strong and healthy, was delivered,

with very little evidence of the heroic dosing of the mother. During this instrumental interference the woman slept peacefully, being completely insensible to pain; and she continued to sleep for eight hours. At the end of that time she gradually regained consciousness, called for food and drink and from that time on had an uneventful convalescence. Since that time the doctor has treated nineteen cases similarly, without loss of either mother or child.

#### SUPPURATIVE MAMMITS AFTER TYPHOID

Inflammation of the breast (mammitis or mastitis) with one or more foci of suppuration may occur as a complication of, or as a sequel to, enteric fever, the Eberth bacillus being the infecting agent. The abscess is

apt to form without much pain and with very slight elevation of temperature. Simple free incision as soon as pus is localized is sufficient to cure, since the infection is a mild one and has no marked tendency to spread throughout the gland. In some cases the staphylococcus pyogenes aureus is also present, when the fever is higher, the pain harder and the tendency to spread greater than in the unmixed infection. The paratyphoid bacillus, it is claimed, may also be the cause of mammary suppuration.

#### PRURITUS VULVÆ

When the itching is confined to certain small patches, the trouble is a trophic lesion and cannot be cured by mere local applications; excision of the affected local areas being the only remedy.

## DERMATOLOGIC THERAPEUTICS

### THE RATIONAL TREATMENT OF ACNE

More and more physicians are beginning to see the vital interdependence between skin lesions and the functions of the internal organs and are arranging their treatment accordingly.

Dr. F. C. Curtis of Albany, N. Y. (*Dietetic and Hygienic Gazette*) believes that acne is due to imperfect functional activity of the organs of digestion and attendant lowered vitality. He says that no permanent cure can be effected if this element of the disease is disregarded. He says further that there is a direct connection between the action of the stomach in the process of digestion and the circulation of the face. Every one experiences a fulness of the blood-vessels of the face during the digestion of a hearty meal. He outlines his treatment as follows: Prolonged and complete mastication of food, leaving its choice to the appetite of the subject; suitable aids to stimulate the digestive activity; regular action of the bowels by the varied means appropriate to

each case; and, of like importance, to reach the distal end of digestion by *short but strenuous exercise* through its appeal to the entire muscular system.

A short vacation will do more than medicine for an overworked school-teacher. Vigorous walks in the open air are prescribed, preferably some three hours after the mid-day meal, preceded in the under-nourished by such concentrated food as a glass of milk taken slowly by itself or a tablespoonful of codliver oil or mixed fats with hot water. This change of activity rests even a tired housewife. Fresh air, especially at night, has to be always prescribed. A morning scrub of the surface of the body with a bath-brush, soap and a little hot water, preceded by short calisthenic exercise, will draw the blood from the inner organs, and toning the cutaneous muscles of the body will likewise tone those of the face and certainly increase the beneficial effect of local treatment. Sluggish circulation goes *pari passu* with sluggish gastrointestinal action.

Whatever is called for in the way of medicinal tonics and nutrient medication will further invigorate.

In local treatment the chief thing is cleansing, antisepsis and stimulation. Thus, with hands and finger-nails made surgically clean, the face may be lathered abundantly with clean, warm water and soap and then deeply massaged and cureted with the nails. This will remove squamous epithelium, open and clear the follicles and tear open the papules and pustules. It is best done at bed-time. A paste containing lac sulphur and salicylic acid or like antiseptic stimulants can then be well rubbed in. Such a procedure satisfies the local indications. It can have only temporary effect by itself and alone.

#### A USEFUL DEPILATORY

Besides sulphide of barium paste there are other combinations which may be used to remove the hair preparatory to a surgical operation—all especially useful for parts where a razor cannot well be utilized. The following, like most others, combines an alkaline caustic action with that of a soluble sulphide:

Monosulphide of sodium	1 part
Quicklime	1 part
Starch	2 parts

Mix and add water, a sufficient quantity to form a stiff paste.

The sodium monosulphide and the quicklime are to be separately pulverized. An intimate mixture is then made with the starch. The amount of water added must be gauged carefully, for too much will give a thin paste of no value, while too little water produces a crumbly mass that has no depilatory action. The water should be added very slowly, until a mass of smooth, salve-like consistency is obtained. Before application, the patient must be thoroughly washed; all the long hairs should be removed with a pair of scissors. The paste is then freely applied with a spatula, forming a uniformly thin layer over the desired place. After five minutes the salve may be removed

with a sterile swab of cotton. The skin is to be thoroughly washed with sterile distilled water until all alkali is removed. This leaves the surface so nearly aseptic that the only other preparation necessary is the application of 70-percent alcohol for about two minutes (if possible) and then rinsing with 1 in 2000 solution of bichloride of mercury.

#### OINTMENT FOR PSORIASIS

In the most obstinate cases of psoriasis the following ointment will be found efficient. It is rare to come across any cases in which the patches have not disappeared under its application. Of course we do not mean to say that it prevents relapses, but still by occasional applications of this ointment and by proper internal treatment, combined with a diet containing but a minimum of meat, one can keep the patient pretty comfortable. It must be said, however, that it is not advisable to use this ointment on psoriasis of the scalp. It is too strong for that purpose and may produce a conjunctivitis. For psoriasis of the body, however, or limbs it is excellent.

Its formula is as follows:

Chrysarobin	Gms. 5
Salicylic acid	Gms. 5
Oil of cade	Gms. 10
Green soap	Gms. 10
Petrolatum	Gms. 70

To allay the dermatitis caused by this ointment apply the following:

Zinc oxide	drs. 4
Bismuth subnitrate	drs. 2
Starch	drs. 2
Petrolatum	ozs. 2

#### OVARIAN PAIN

Most gynecologists of much experience will agree with Byron Robinson that when women complain of pain in the ovaries, 95 times in 100 the trouble is not with the ovaries but is a hyperesthesia in the inguinal region along the ileohypogastric and ileoinguinal nerve.

# Opportunity

Written for CLINICAL MEDICINE

By CHARLES EUGENE BANKS

It has oft been said if a man be led by Fate to the one full tide,  
And he launch his bark, be it dawn or dark, to the height of  
his power he'll ride,  
But if he delay, for the rest, his way is bound by beggarly toil,  
And he ne'er may share in the things most fair, nor the deep  
sea's richer spoil.

'Tis a lie they tell for the good of hell and the pride of the  
father of lies,  
For the beat of each rhyme in the song of Time is rich with its  
own dear prize.  
There are scattered seeds for the whole year's needs, and the  
south-wind's voice will call  
For the blush of spring and the new-fledged wing to follow the  
frosts of fall.  
The good of earth is the fruit of birth, and the bins of the wise  
are crammed  
With the garnered grain of the constant plain, and never an  
hour is damned.

There is never a loss in the rainbowed floss that is spun to  
the endless chime,  
Nor an end e'er told to the cloth of gold that grows in the loom  
of Time.  
The world that reels on its luminous wheels has ever and aye  
to run,  
And the dark must flee, if it still would be, and hide from the  
face of the sun.  
But the dark and the sun and the man are one, and Man is  
their master born,  
For he carves the night with a sword of light, and the fates are  
his mirth and scorn.

Though the tide go out it must turn about with the beat of the  
great world's heart,  
And the rose that falls from the castle walls comes back through  
the mire of the cart.  
Hope still gives wings to the meanest things, and the symbol is  
less by far  
Than the substance caught by the subtle thought and wrought  
to the Things that are;  
'Tis the Gross who say if we fail today we shall fail to the door  
of doom,  
For the fall of the rain is the earth's sure gain, and the end of  
all death is bloom.





# GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



## DOSIMETRIC PROGRESS ABROAD

A report of some of the things they are doing in France to popularize the dosimetric idea, both among physicians and the laity

ONE excellent *confrere* and editor of *La Dosimetrie*, Dr. E. Toussaint, of Paris, has much to say of the status and progress of alkaloidal therapy at the present time. Valiant Dr. E. Toussaint has been editor of *La Dosimetrie* for the last fourteen years, and so he says:

"If after so long a time of work and valiant contention militant dosimetry ("alkalometry" in America) casts a look behind, it can affirm, not without pride, that it has not spent its time nor wasted its pains in vain. While many a system had foundered, after many a doctrine had been shaken to its very foundations, dosimetry alone—practical, convenient and dangerless—stands upright, wide awake, dominating the entire field of therapeutics, pursuing its triumphant march across the whole world. There is not at this hour a single medical practitioner who is well instructed and seriously and truly desirous to heal his patients who, though he may not apply our practice in all its integrity, will not employ at least some certain ones of our dosimetric medicaments. And it is for the contributors and associate editors of this journal a deep source of pleasure to be able to recognize that since the founding of this medical review there has been a steady progress both in the medical press and in learned societies of that method of treatment which we prefer

from conviction, because we have tried it and because we have recognized it as of real efficacy.

"The Dosimetric Institute will aid us greatly in propagating the ideas of Burggraeve. This year its director, Dr. Chanteaud, is organizing a competition—to which all dosimetric physicians of the world are invited—in the preparation of a practical manual of dosimetric pharmacology and therapeutics for the use of the laity. It will be remembered that the competition closes on the first of October and that one thousand francs are appropriated for this purpose. We have no doubt that a new volume will enrich the Dosimetric Institute this year."—(*La Dosimetrie*, Jan., 1908.)

### SEVERE COCAINE POISONING

That more caution than usual should be practised in applying strong solutions of cocaine to the mucosæ of the upper respiratory passages for anesthetic effect will be seen from the following cases:

Case 1: A nineteen-year-old girl had a slight nasal affection and was to be operated upon. Before the operation 0.0225 (about gr. 1-3) of cocaine in solution was brushed over the nasal mucosa, when the girl suddenly fell to the floor without any premonitory signs and had violent epileptic convulsions.

Consciousness was gone entirely, respiration became very difficult and slow, while heart-action was good and normal. The attack was soon over, but while it lasted the girl's face was cyanotic and the pupils were dilated to the extreme.

Case 2: A man, twenty-three years of age, had a nasal and maxillary-cavity affection for which he had been operated upon before under cocaine anesthesia without any ill effects. This time, when the cocaine was applied, he fell to the ground as if struck by lightning. Respiration ceased, pupils were dilated and without reaction, the body was stiff, but the heart's action remained normal. The man was saved with difficulty by artificial respiration. The after-effects of loss of consciousness, stiffness of the neck and nervous pains lasted for several weeks. In both cases respiration was affected while the heart was not influenced. It is not impossible that hysterolepilepsy may have had a share in both of these phenomena.—(*Muench. Med. Wochenschr.*, 1907, p. 1654.)

#### CARDIAC HYPERTROPHY CAUSED BY ADRENALIN

At the meeting of October 12, 1907, of the Société de Biologie de Paris, M. O. Josue described his findings in his first researches about atheroma caused by adrenalin, the hypertrophy of the heart accompanying arterial lesions. (November 1903). This hypertrophy affects both right and left ventricle, and at times all the four cardiac cavities seem to be increased in size. Histological examination shows that there are no lesions in either the blood-vessels, connective tissue or muscular cells, yet the latter are larger than normally.

Cardiac hypertrophy caused by adrenalin may take place without there being at the same time any atheromatous affection of the aorta. It may even happen exceptionally that the usual lesions of the aorta which follow after an animal has undergone a great number of adrenalin injections are also absent, and all we find is only a general cardiac hypertrophy. Yet none the less cardiac

hypertrophy follows in the wake of arterial atheroma in a certain number of cases. The fact is, these two lesions arise from one and the same cause.

The experimental facts are comparable on the whole with those which are observed in human pathology. Here too we see at times cardiac hypertrophy isolated without any possibility of our connecting it with any alterations in the arterial system. It is, therefore, in place to inquire in a certain number of cases of cardiac hypertrophy whether it is not caused by the same agents which produce arterial lesions.

And yet, in the human being the alterations are generally far more complex. It is altogether exceptional to meet with pure cardiac hypertrophy without finding any other changes superadded. We meet, very often, in such cases sclerotic lesions or changes in the arterioles in the cardiac muscle.

Experimentally the author determined the existence of complex alteration by injecting subcutaneously in rabbits sterilized cultures of typhoid bacillus at the same time while injecting intravenously adrenalin under usual technical precautions. In this way he obtained enormous cardiac hypertrophies. On histological examination there were found hypertrophied muscular cells, as in animals which received only adrenalin injections. But there existed at the same time a mass of degenerated muscular cells. There could be seen also small islands of sclerotic tissue which occupied the place of muscular cells.—(*La Médecine Orientale*, 1907.)

#### CIRCULARISM (PERIODICITY) AND MUSICAL GENIUS

It is interesting to observe the influence which periodic psychic attacks have had on the fecundity and position of literary, artistic and scientific geniuses. This influence became greatly manifest in the musical works of Schumann and Hugo Wolff.

Schumann's course of life was crossed by six grand crises of melancholic depression, between which we find periods of superactivity and productiveness, with diffuse

humor, which correspond to crises of excitement. During the last years of his life the uneven stormy works of the great artist reflect oscillations most marked in his psychic activity, which then was diminishing. After that there appeared hallucinatory deliria, attempts at suicide, and he died of a diffuse chronic encephalopathy, the nature of which could not well be determined.

Hugo Wolff died of general paralysis, and between his twenty-seventh and fortieth years of age he had four attacks of excitement, during which time he composed twenty songs. Between the attacks there were long periods of inactivity and absolute musical silence.

These two cases are interesting inasmuch as analogous causes produced effects of periodic psychoses in two musical geniuses, both of whom died of an organic cerebral affection otherwise foreign to intermittent insanity.—(*La Medicine Orientale*, 1907.)

#### HYPNOTHERAPEUTICS

Cramer expressed himself, in the *Medizinische Gesellschaft* in Goettingen (Feb. 14, 1907), about the therapeutic value of hypnosis as follows:

"Hypnosis can remove all kinds of suffering which are accessible to suggestion as, for example, the morbid conditions of hysteria, nervousness, etc. In organic diseases or those of an endogenous nature (psychoses) hypnosis is of no avail at all. Hypnosis is decidedly dangerous in persons whose brains are inclined to morbid states or those who are disposed to mental diseases. Persons of this kind who had been hypnotized often were observed to break out early in insanity which might otherwise have been delayed for some time. In nervous exhaustion also hypnosis is not to be employed because of the danger of a total collapse from the great strain on the nervous system. Cases, too, were observed in whom irritableness and a change of character took place after having been repeatedly hypnotically experimented upon."

Von Voss however (*Medizinischer Verein* in Greifswald, Feb., 1907) regards hypnotic

treatment indicated especially in certain neurasthenic single symptoms, such as insomnia, sexual disturbances, enuresis, masturbation, nervous asthma, and above all, in alcoholism. Hysteria, especially in its severer forms, gives no promising object for hypnotic treatment. Dangers of properly used hypnosis are almost *nil*, but it requires much of the physician's time and patience.—(*Wiener Med. Wochenschr.*, 1907.)

#### LUETIC ECZEMA

Lassar called attention, at the meeting of the Berlin Medical Society, of Feb. 27, 1907, to the fact that a great number of cases of eczema and sores of the leg have syphilis as their basis and that a proper specific treatment will bring about a speedy cure. The luetic nature is often unrecognized.—(*Wien. Med. Wochenschr.*, 1907.)

#### TREATMENT OF CHILBLAINS

Dr. Brock advises bathing the hands in a hot infusion of walnut leaves, drying, and then rubbing with a mixture of salicylate of bismuth, 2 1-2 drams, and starch, 3 ounces.

Vesperal itching can be relieved by rubbing with glycerin, 1 1 2 ounces, in which from 10 to 15 grains of tannin is dissolved.

In persons predisposed to chilblains Dr. Brock recommends as an internal preventive treatment, to begin in October or when the cold sets in, the following combination to be made into one pill, two to four of which are to be taken daily during the winter: Quinine sulphate, gr. 1; ergotin, gr. 1; powdered digitalis leaves, gr. 1-10; extract of belladonna, gr. 1-50.—(*Le Monde Medical*, 1907, p. 264.)

#### GOOSE-SKIN AND THE EMOTIONS

Bakinsky showed a young woman in whom the phenomenon of goose-skin could be produced at will by irritating the sole of the foot or by a sudden exclamation or threatening to prick her. The matter involved here was yet not that of suggestion since the phenomenon could not be modified at will

neither as to duration nor as to form. Emotion and suggestion are two absolutely different things. It is known that the fright of shipwreck cured nearly all the passengers of their seasickness. It is therefore not a question of the phenomenon by suggestion but really of the emotional order.—(*Gazette des Hôpitaux*, 1907.)

#### STROPHANTHIN INTRAVENOUSLY

This mode of administering strophanthin from most recent researches seems destined to displace the internal administration of digitalis. Strophanthin (Boehringer) has a remarkable and certain effect upon the circulation when disturbances of the same are owing to cardiac affections. Side-effects from such administration of strophanthin there are none. Rise of temperature and chills, which were formerly observed, were owing to bacterial impurities which are eliminated at present. Frequently repeated injections do not diminish the effects except in so far as the nature of a progressing disease would bring with it. Cumulative effects do not appear if only one injection is given in twenty-four hours of one milligram of strophanthin.—(*Muench. Med. Wochenschrift*, 1907, p. 2.)

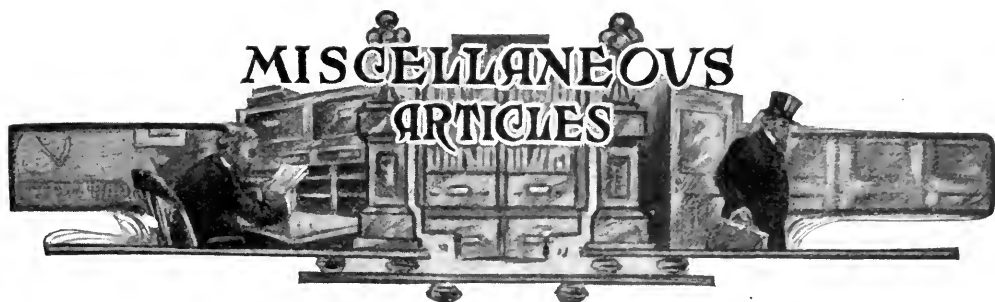
#### SPARTEINE IN POSTOPERATIVE ANURIA

According to Dr. Mac Guire sparteine sulphate is a very effectual remedy for post-operative suppression of urine, a formidable complication which during the last five years has been responsible for more deaths among the author's patients than any other cause. Anuria occurred more frequently in cases where nephritis existed before operation. It is not a matter of reflex nephritis from shock since the urinary suppression as a rule did not supervene for 24 or 36 hours after the operation. Every means resorted to in succession by the author to avert this complication—copious saline injections, hot-packs and vapor-baths, cupping, counter-irritation, strychnine, digitalis, trinitrin,

calomel, saline purgatives, and in one case decortication of the kidney, had invariably proved futile. Ultimately he was induced to try sparteine sulphate and was pleased with its action. In the six cases in which he has had occasion to employ it its stimulating action on the heart and its diuretic effects were manifested in half an hour by a heightening of arterial pressure, an improvement of the pulse and secretion of the urine. The effects were maintained for from four to six hours after each administration. In order to obtain good results the sparteine must be given hypodermically in doses of from one to two grains, to be repeated every four or six hours.—(*Le Monde Medical*, July, 1907.)

#### THE RATIONAL TREATMENT OF HIGH BLOOD-PRESSURE

G. Oliver (*Lancet*, 1907) says that in high-blood-pressure there should be omitted from the diet everything that is calculated to increase such pressure. Especially should extractive matters, soup, etc., be omitted. Coffee and tea to be used only in small quantities, and alcohol should be avoided in very high blood-pressure, although in less severe cases it may be allowed. In carrying through a possibly saltless diet he recommends fruit, soups, fresh green vegetables, nuts, fats, salt pork, bread, potatoes, rice, peas, sugar. In chronic nephritis a saltless diet is not always necessary. A diet for some weeks of milk or of milk with carbohydrates is frequently of great benefit, and so is also a strictly vegetarian diet with the addition of milk. As intestinal antiseptics he recommends benzonaphthol, salol, salacetol, and mercury. As effectual sedatives of blood-vessels ammonium bromide and ammonium benzoate or hippurate. Citric acid and its salts are considered as reducers of pressure as well as of blood coagulability. Sparteine in doses of Gm. 0.25 three times a day for adults has lately been recommended for reducing blood-pressure.—(*Wien. Med. Wochen.*, No. 36. 1907.)



## A TOAST TO "THE DOCTOR"

Delivered at the annual banquet of  
the General Practitioners' Society,  
Columbus, Ohio, December, 1907

By C. F. GILLIAM, M. D., Columbus, Ohio

MR. TOAST MASTER, LADIES AND GENTLEMEN: When your Committee on Program informed me that they had assigned to me the Toast, "The Doctor," I did not at first conceive the immensity of the subject, and I find that in the limited time at my disposal I shall only be able to touch upon it in spots. Now, with such a toast as Dr. Williams's, "The Ladies," one need only to hunt up all the superlative adjectives in the dictionary expressive of admiration, and fire them at the audience, with the added explanation that they only half express his feelings, in order to make a hit.

It is not my purpose on this occasion to attempt to deal with the doctor—in the domain of science, in the affairs of state, or in the flowery paths of literature. Indeed, I shall not even touch upon the noted men of our profession who sit in their richly furnished offices under the guise of specialists, but will confine myself to the plain, everyday doctor, such as collectively makes up the membership of the General Practitioners' Society, and who does the medical work of the smaller towns and rural districts. Neither is it my purpose to hand out nothing but large, sweet chunks of taffy, and those of you who have picked the filling out of

your sweet-tooth with the idea of having it refilled this evening, may have to repair to the dentist.

### *The Bitter with the Sweet*

There is always some bitter with the sweet in this world, and the doctor gets his full share of it. Fortunately, human nature is so constituted that we often get our greatest pleasure in recalling and reciting the experiences that were the bitterest and hardest at the time. Some of these, however, leave a lasting sting.

No doctor who is a true doctor in spirit—and no one ought to enter the profession who does not have a real love for humanity in his heart—ever regrets the physical hardships he has undergone in the relief of human suffering. No night is too dark or too cold, no wind too high, no storm of sleet or rain or snow too severe, or no road too rough for the earnest, enthusiastic doctor to venture forth on his errand of mercy, if he thinks his work will meet with proper appreciation. And that too, sometimes, when he is suffering from disease more than the one to whom he is called to minister.

But ingratitude bites like a serpent's tooth. How often do we have people come to us with tears in their eyes and voices

trembling with emotion, pleading for our services on the instant and offering to make any sacrifice to pay, yet who, when our services are rendered and in due course our bill presented, absolutely ignore us; refuse us recognition when met on the street, or possibly inform us gruffly if spoken to about it that they will pay the bill when they get able, but "don't want to be hounded to death about a little thing like that." Many people make a practice of paying their bill by pretending to get *angry* at the manner in which it is presented.

In such cases about all we can do is to bide our time and when there is a subsequent call from the same source, emulate the doctor I heard described in a poem many years ago, entitled,

"AFTER POE—A LONG WAY."\*

Once upon a midnight dreary  
The doctor slumbered weak and weary,  
And all the town could hear  
Him snore.

While he lay there sweetly napping,  
Suddenly there came a tapping,  
Like a ram-goat madly rapping,  
His hard head upon  
The door.

"Get thee up!" a voice said loudly,  
"Come in haste," it added proudly,  
Like a man who owned a million  
Or much more.

But the doctor never heeded,  
Back to dreamland fast he speeded,  
For such men as that he needed  
In his practice  
Nevermore.

For long months that man had owed him,  
Not a cent he'd ever paid him,  
And the doctor now will dose him  
Nevermore.

But probably the most unpleasant experience of the doctor is where he has enjoyed a family's confidence for years; entered into their joys and sorrows and been the trusted confidential friend as well as physician, until they have come to regard him as well-nigh infallible. At last the fell destroyer—incurable disease—steps in and snatches a loved one from the family circle, despite his utmost skill and care. Then the meta-

morphosis takes place, and his erstwhile warmest friends become his bitterest enemies. Forgotten are his unwearying exertions; his hours of watching at the bedside; his burning of the midnight oil in looking up authorities, and of his tramping his room to and fro in his endeavor to think of some way to head off the Grim Destroyer. Too often this condition has been brought about by the intentional dropping of insinuating words by the fellow doctor who has been called in consultation. The word in confidence to friend or relative: "To late now, if I had been called earlier something might have been done," often work incalculable injury. Is it any wonder some doctors are chary of requesting a consultation? One doctor can cut off another one's head as effectually by a wink, nod, shrug of the shoulders or peculiar intonation of the voice, as if he had used the sharpest sword.

*On the Other Side—Gratitude*

While these belong to the bitter side of the doctor's experiences, we learn in the course of time to take them philosophically. No one is better acquainted with the frailties of human nature than the doctor, and he knows too that the good predominates over the bad. Though occasionally the victims of the grossest ingratitude, many times he goes on his way with his heart pealing an anthem of joy that he has been able to arrest disease and relieve human suffering, and often accompanied with the tearfully expressed gratitude of some good mother, wife or daughter, or the grateful hand-clasp and simple word of gratitude of a husband or father who by that act expresses a volume of the feeling that is welling up in his heart. At such times, what are hardships? They vanish like mists before the rising sun, to be succeeded by such a feeling of well-being as only the faithful, conscientious doctor can appreciate.

No man has given us such a picture of the faithful doctor as has Ian McClaren in his "Bonnie Brier Bush" in describing Doctor William McClure. Gruff and brusque, except to women and children, who loved him as if by instinct; not a church-going

\*By Dr. C. W. Tompkins, Jasper, Florida.

man, and occasionally given to rather strong language, in a deeply religious Scotch community, he wore himself out in his forty years' service in their behalf. No one was too poor to command his best efforts, no icy stream or snowdrift too swift or deep for him to plough through on his faithful old gray mare when the call of human suffering reached his door.

At last the end has come, not from disease, but simply worn out.

His old friend Dreumsheugh of Drumtochty is at his bedside and he asks his friend to read to him from the Bible, where it opens naturally. And Dreumsheugh read: "And the publican standing afar off would not lift up so much as his eyes to Heaven, but smote upon his breast, saying, 'God be merciful to me, a sinner.'"

"That micht hae been written for me, Paित्रick," said the doctor. "It was nae easy for me tae get tae Kirk, but I cud hae managed wi a stretch, an a' used langidge I sudna, an I micht hae been gentler an no been so short in the temper. A see it noo. It's ower late to mend, but yeil maybe juist say tae the fouk that I wes sorry, an am houpin' the Almichti 'ill hae mercy on me. Cud ye pit up a bit prayer, Paित्रick?"

"A haena words, said Dreumsheugh" in great distress. "Wud ye likes tae send for the minister?"

"It's no the time for that noo," answered the doctor, "an a wud rather hae yersil—juist whats in yer heart, Paित्रick."

So Dreumsheugh knelt and with trembling voice and many pauses prayed: "Almichty God—dinna be hard on Weelum McClure, for he's been nae hard wi onybody in Drumtochty—be kind tae him as he's been kind tae us all for forty year—We're ah sinners afore Thee—Forgive him what he's dune wrang, an dinna cuist it up tae him—Mind the fouks he's helpit—the wimmin ah bairnies—an gie him welcome hame, for he's sair needn't it aifter ah his wark. Amen."

Though never the recipient of many expressions of regard during his life from the large-hearted but dumb-of-speech people among whom he had spent it, when the funeral came—the worst day for many

years—every able-bodied man from Drumtochty, Kildrumie, Muirtown, Upper Urtach, Dunleith and Glen Urtach fought his way through the perilous drifts and icy streams up to his armpits, to his humble cottage, as he had oftentimes fought his to their homes, in order to show his affection and reverence for the dearly beloved doctor. After listening to the service at the grave with bared heads in the chilling blasts, Lord Kilspindie paid his tribute to his dead friend, who had steadfastly refused to receive any aid from him in life, and craved the privilege of erecting a monument over his grave. He asked the good minister to suggest a fitting text to inscribe on it. Without hesitation came the answer: "Greater love hath no man than this, that a man lay down his life for his friends."

Is'nt it better to have earned such an inscription as that, than to have piled up wealth for our families to quarrel over after we're dead?

And when the final summing up comes, if some village cynic and pharisee says about us as the man Milton did of Dr. McClure: "Nae doot Dr. McClure had mony natural vartues, an he did his wark weel, but it was a peety he didna mak mair profession o' releegion," let us hope there will be some good friend to answer for us as did Lachlan Campbell for Dr. McClure: "God's judgment of Dr. McClure is written in the gospel, but it is Weelum McClure that will not be expectin' it."

"What is it Lachlan?" asked Jamie Soutar eagerly.

The old man, now very feeble, stood in the middle of the road, and his face, once so hard, was softened in winsome tenderness, as he repeated: "Come, ye blessed of My Father—I was sick, and ye visited me."

#### OBSTETRICAL EXPERIENCE WITH H-M-C

I had a strange (to me) case one week ago today. I was called at 5 o'clock in the morning to attend an obstetrical case, the woman, a mother of four boys, having been in labor from 1 o'clock. I found the os dilated little more than one finger. The patient was

screaming as pains came on, which were frequent. I gave one tablet of the full-strength of H-M-C compound, hypodermically. In half an hour after the baby, a girl of 8 pounds, was born. The medicine had not had time to exert its effect, or at least the patient made just as much fuss. The placenta came in ten minutes after. Then the patient began to get sleepy, in another hour was asleep and slept four hours; did not know when I cleaned her up. There was little after-pain. The only trouble I find is that the effect is slow in coming on. Thus in this case it was of little real value except that after the pain was over it quieted the patient, which of course is of some value. This is the only time I have tried the preparation. Shall try it again.

M. E. FULLER.

Wauconda, Ill.

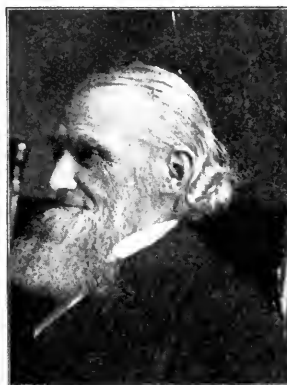
[The anesthetic was given too close to delivery to get its full effect, Doctor. It should have been given (the half tablet) as soon as expulsive pains became severe, giving a second tablet in one to two hours, as needed or when the child's head pressed upon the perineal floor. Used in this way, the pain of delivery becomes a negligible quantity. Thousands of doctors are glowingly enthusiastic concerning this method of managing a confinement case. Try again, Doctor.]

#### WHY DO I LIVE SO LONG?

I am told, and I have to believe it, that I was born seventy-nine years ago, and that the anniversary of my eightieth birthday will be, as it always was, on the day before the fast of Esther (Esther, 4:16), that is, the twelfth day of the twelfth month, *Adar*, counting the passover month *Nissan* as the first. (Exodus 12:2.) Seventy-nine years ago that day was the 17th day of March—St. Patrick's Day. I wondered when I was told last month that this article came too late for publication. But I see now the reason why. This year is also Jewish leap year, and that means a whole month added, hence my Jewish birthday comes a month later in the year of grace, 1908. In

all these there is nothing portending any promise of longevity so far as I know, and I know nothing of astrology.

My father and grandfather, both of whom I knew, lived within a year or two of one hundred years. Both of them were tall, stout and portly, active business men, lived well, had many children, used alcoholics and tobacco moderately and drank much tea. In his sixties my father withdrew from business and gave himself over to the study



DR. E. M. EPSTEIN

of the Talmud, to which he gave from twelve to fourteen hours a day.

When I was about twenty years of age, grandfather's posterity numbered nearly seventy living healthy men, women, children and grandchildren. There is no hereditary disease in the male line of his posterity. In the female line I knew of one who died of cancer of the bladder. Another one I knew committed suicide after the loss of a large sum of money. One grandchild of his in the male line, a boy of thirteen, died of hip-joint disease. There was and there is no cardiac nor pulmonary disease among our grandfather's male posterity. Yet I knew father and grandfather to have been great sufferers from rheumatism and bladder troubles with great inconveniencing polyuria. I, too, suffer from these troubles in the last twenty-five years. It may be that the excessive diuresis saved father and grandfather from too early senility and death, and does the same for me thus far.



The mental habit of grandfather's posterity is idealistic, searching, originative, literary, and in his ancestry which we can trace back to the sixteenth century, there were very few merchants and the rest were officiating rabbis and learned talmudists. Close talmudic study is not mere devotional repetition of texts, but an acute exercise of subtle reasoning which has great attractions. Is literary predilection and pursuit conducive to longevity? May it not be so by preventing senile ennui with its consequent gormandism and its train of life-shortening evils? I have seen such cases in my practice.

Of my mother's family I knew only two of her brothers and a son of one of them. One of the brothers died in early manhood, the other was sterile by nature, married in advanced age and died in consequence of an operation for incarcerated hernia. My mother was a blond, of quiet, unresisting, unpretentious nature and in every respect bodily and mentally different from my father. She married my father when she was thirteen years of age, he being one year older. At fourteen she had her first child, a daughter who died at seven years of age of an unstaunchable hemorrhage from leech bites which were applied to the lower part of her abdomen for some acute internal disease. My mother died in her sixties, and gave birth to eleven healthy children, three sons and eight daughters. I am her fifth child, and with me survive my three sisters, these being her fourth seventh and ninth daughters. All of us, with the exception of two—a sister and a brother who died, one in childhood and the other in infancy—were married, and some of them lived to see their grandchildren, and I myself have great grandchildren. This betokens a healthy, prolific race during six generations, of which two only have died out.

I resemble my father mentally and temperamentally and in voice, yet there was little sympathy and affection between us, while bodily I resemble my mother, except in complexion and in the color of my hair—before it became gray. And between mother and myself there existed, and I

think there exists yet, an unextinguishable affection, so that there is nothing in life I would not and did not give up for her. I would do so for father, too, but only from duty.

My mother had occasionally severe gastric spasms coming on mostly at night and at long intervals. I did not inherit it from her. My father was rheumatically affected and also with polyuria, and both of these I inherited from him.

I passed my childhood bodily uneventfully, afflicted with no sickness incident to that age, acute or chronic, except painful caries of the teeth. At four years of age I began to attend private school where I learned my Hebrew alphabet, and soon my prayers, with understanding, in Hebrew, and at eight years I was installed as synagogue ritual cantilating reader of the prophets and the five scrolls in Hebrew from manuscript. And as these are written without vowels and peculiar signs of cantilation it involved considerable exercise of memory, and my father was very exacting in the performance. At the marriage of Alexander, then crown prince of Russia under the reign of Emperor Nicholas I, I delivered a Hebrew ode in his honor at the grand and ancient synagogue of Brest Litevsk, my parents' that-time residence, in the presence of a great audience and the Christian municipal authorities. I mention these facts to show that my health and stamina in childhood were equal to the required mental exertion for these performances. In youth and until about my twenty-fifth year of age I was subject to frequent alternating attacks of tonsillitis and headaches.

The diet of well-to-do Russian Jews seventy-nine years ago, which I enjoyed in my childhood and youth, was most conducive to a healthy growth. Wheat bread was served only once a day (in the morning) and the "staff of life" consisted of rye bread, mostly of unbolted flour. Meat only once a day, together with soup, and vegetables such as cabbage, onions and lettuce (both raw and cooked), as well as roots such as large summer- and winter-radish, potatoes, carrots and horse-radish

Oatmeal soups and cracked buckwheat were served usually twice a day with milk or meat-fat.

The religious custom of living extra well every seventh day, allowing then three or four courses three times in the twenty-four hours in honor of queen Sabbath I consider excellently conceived for the bodily growth and maintenance of childhood, youth, manhood, womanhood and mature age. Fats such as butter, fat of meat, fat of fowls, especially of geese, linseed oil and other seed oils were consumed abundantly. Of sweets honey was much used raw and in bakery, while cane-sugar was more of a luxury and used sparingly with tea and coffee. Milk, sweet as well as in form of cream and clabber, was largely consumed. Alcoholic beverages of any kind were not an article of diet for children and youths, but a very light sourish table-beer was much used in summer. Coffee very little, but tea was drank in great abundance. I do not recollect any article of Russian Jewish diet that lacked in simplicity, wholesomeness and nutritiousness seventy-nine years ago. There was no lack of good food, raiment and shelter in my parents' house, and the social life of a brother with sisters, brothers-in-law and their children, all bright, healthy, good looking, cheerful, and at home in the literature of our peculiar people and to some extent in that of other people, was not a little conducive to a healthy, youthful growth.

At my thirteenth year of age I, together with my sisters, was sick with the measles for seven weeks, and the medicine a German military physician gave us during all that time I know to have been the liquor of ammonium acetate. I recovered without any sequels, grew rapidly, played much out of doors, but never engaged in violent gymnastics and yet got occasional thrashings for alleged excesses.

My studies in the Hebrew Bible and the Talmud were pursued at home with private teachers, while the study of Russian and German were carried on by stealth and secretly. My health was good and I reached the age of puberty quite early.

At my seventeenth year of age I married my first cousin, this being at the behest of my paternal grandfather, who bestowed the dowries on all his grandchildren and did not want to have this wealth to leave their circle. I will say that this kind of benevolent tyranny works neither health of body nor of mind.

After our first child was born I determined, in 1849, to go to the United States of America, landing at New York early in 1850 after a perilous journey of some weeks over land and a more perilous voyage by sea in a damaged sailing vessel wherein we preserved our lives in a nine-weeks' struggle with waves, hunger and thirst. I spent but a few short weeks in New York, trying to earn a living, but was glad I did not succeed, for though never inured to manual labor (and I was then already twenty years of age), still the ideal nobility of labor was cherished by me ever since in my youth my mind became liberated from the trammels of Talmudic haughtiness which makes its devotee presume himself to be superior to the common laborer. It was indeed not so in ancient times, but it was so in Russia seventy-nine years ago. And so I crossed over to Hoboken and plunged into the country beyond to Hackensack and soon found work. I was well received; work in the winter was not hard, food was plenty, and time spared was occupied in learning the English language. I stopped on Squire Ackerman's place till after hay-making time. I had learned some farm work by that time and found another place with more wages where I took care of a small country seat of about thirty acres for a family of a blind father, his wife and two kindly Christian daughters of mature age. It was the family of Judge Sherman of the Marine Court. I was here also treated very kindly and considerately.

In New York I met a playmate of my childhood and early youth who went to France long before I crossed over to the United States, and who a short time before me had arrived here. We used to meet on Sundays after I went to work in the country, either he coming to me or I going

to him. With him I attended in the country one Sunday a Christian meeting-house, for the first time in my life. It proved for both of us the turning point in our lives. We both joined the Christian church soon after. Friends began to increase, and there became no lack of means for me to pursue an educational career with the ultimate object of graduating as a physician, previous to which however I greatly desired to study Christian theology, and this course I was enabled to pursue in Andover (Mass.) Theological Seminary, whence I was graduated after a three-years' course on August 17, 1856. I never regretted having given three years of the best of my life to it. As medicine relates to all physical sciences so does theology, especially Christian theology, relate to all mental sciences, and the physician is not a loser by being a mentally trained man.

E. M. EPSTEIN

Chicago, Ill.

[Dr. Epstein's interesting story will be finished next month. We know every old reader will follow it with interest.—ED.]

### DOCTORS AND ETHICS

By Orr Kenyon, Author of "Amor Victor."

Dear Doctor, the papers have puffed you quite strong,

In fact, most too much to be rational;  
For twice, in a paragraph not very long,  
Your fame is declared to be "national."

(I wonder sometimes if you great men cry—  
"hush!"

For I know you are modest, and don't want to blush.)

The reporter he called to ask questions, and you  
Frowned at him with ominous eyes;

"I must tell you, young man," and you looked  
him quite through,

"By our *'ethics'* we don't advertise.  
No honorable doctor should e'er have a lack  
In himself as to advertise, just like a quack."

"But, Doc," quoth the scribe, "this is not just an  
'ad,'

'Tis a reading note, set in the 'News';  
And there's nothing to pay; I assure you we're  
glad

To give the case all of its dues.  
Our paper's quite proud of our Hospital—see?  
And will give it all proper publicity."

"Ahem!" said the Surgeon, "ahem! yes, I see,"

His objections beginning to scatter.

"If all you will tell the dear Public is free,

Why, of course, that'll make it reading matter.  
Just step in my auto; I'm off for the station,  
But I'll give you the facts of the last operation."

"The patient, you see, is a man of much note,  
A Governor from the Pacific.

The danger was great, much gas and much bloat,  
And peritonitis, terrific.

But the whole operation was quite a 'success';  
He'll go back next week, his constituents to bless."

"Here's the station. Goodbye!" The Doctor got  
out,

The scribe remarked, scratching his head—  
"I'll write it up well." The great man wheeled  
about,

"Just send me some copies," he said.

Quoth the Scribe, "By Hypocrisy!\* 'don't advertise'

I'll lay it to 'ethics,' for in ethics it lies."

### THE DOCTOR'S TALE OF WOE

He must not walk his rounds, for fear the patients  
think him poor,

And dearly do they love to see a carriage at their  
door;

And if his horse is fat—"He must have little work  
to do"—

And if it's lean, the reason is—"He starves the  
poor old screw."

Should he call upon his patients each day when  
they are ill

His motive plainly is to make a great big doctor's  
bill.

If he visits them less often thus lessening their  
expense,

The chances are he'll be accused of wilful negli-  
gence.

[Who is the author? We don't know.  
Someone sent this to us and we have mislaid  
the correspondence. It's good. Who will  
claim it?—ED.]

### FROM A KANSAS MAN

Perhaps you would like to see the home  
of a doctor who has read every issue of  
THE ALKALOIDAL CLINIC and CLINICAL  
MEDICINE, from Vol. I, No. 1, and who  
has the entire file, too.

I send in this mail a picture of our Kansas  
home. The picture includes our family,  
which consists of myself, my wife, little  
Bernice and "grandma," who was 90 years  
old the day before Christmas.

\*Errata—"Hippocrates." O. K.

I enclose a few lines which are original and are part of my response at the annual banquet of our Franklin County Medical Society. This is selected from my large (?) collection of unpublished verses:

#### THE HERO

Sing not of the brave deeds of heroes of old  
Whose valor on history's pages is told—



HOME OF DR. J. REED LYTLE

Of Hector, Leonidas—men of renown  
Who in warfare and tourney their foes have thrown  
down;  
For not in the tourney where brave knights do  
battle,  
Nor yet on the field where the loud muskets rattle,  
Nor where brave deeds are done in the thick of  
the fight  
Is seen the high courage I sing of tonight;  
But courage transcendent and past all compare  
I'll show in a moment, just follow me there  
Where the doctor reposes, a slumbering hero—  
In the dead of the night and the mercury zero—  
The telephone bell breaks his dreams bright and  
rosy—  
He unflinchingly leaps from his bed warm and cosy,  
Gets into his clothes without protest or moaning  
And is off to relieve some poor sufferer's groaning.

J. REED LYTLE.

Richmond, Kans.

[Our compliments, Doctor, both on the home and "The Hero." The latter is fine; the former something of which to be still more proud. These articles about doctors and their homes and families are all appreciated, we can assure you. Let them keep coming. Let us get better

acquainted with each other in every way. The CLINIC is at your service.—ED.]

#### FOR THE RELIEF OF PAIN

I have been using the H-M-C anesthetic tablet for cases in which I have formerly employed the combination of morphine and

atropine; that is, for relieving the severer forms of pain. I find the new combination far superior to the old one. Its application in my hands may be illustrated by the following case: A lady had become violently insane, the type being mania of the restless and noisy kind. So severely maniacal was she, that at my first visit I gave a whole H-M-C tablet and half of another, hypodermically, at a single dose. This quieted her for four hours. The next evening, as the violence had

recurred, I administered two tablets, hypodermically, at a single dose; following this she slept for seven hours, without any unpleasant indications of pulse or respiration. The next night I repeated this dose and she slept for five hours. On the fourth day the patient was taken to the asylum. I did not notice any bad signs whatever, from the doses administered.

The combination has proved excellent in my hands as an anesthetic, in obstetric cases replacing chloroform.

W. E. DODDS.

Richland, Iowa.

[It is our belief, from personal experience and numerous reports that have come from the field, that as a general rule the H-M-C anesthetic tablet can with great advantage be used to replace morphine alone and morphine and atropine, in the entire range of the action of this powerful analgesant. In the use of either of these our first duty, which should never be neglected, is to

eliminate freely from the first. Substituting the H-M-C for the morphine, or morphine with atropine, it will be found that 1-4 grain of morphine as presented in one of the full-strength tablets will satisfy the patient as much or more than one to three grains of morphine alone. After keeping the patient under hyoscine enough to make him drowsy for two or three days, while you are keeping up the elimination with emetine, salines, etc., sharp tonic doses of strychnine nitrate may be substituted, and the reaction which is to be expected about this time will be greatly favored. If strychnine is used too soon, however, there may be a recurrence of suffering, especially if the patient had become habituated to the use of morphine. Strychnine must not, on any account, be used at the same time as hyoscine, as the two are not in any sense synergistic. Whenever a patient has been accustomed to taking morphine with some regularity, whether for the relief of pain or as a habit, this must first be gotten rid of, drained out of the system by eliminants, and possibly to a certain extent substituted by hyoscine, and elimination completed, before strychnine is used to promote reaction. In these, of course, we are only speaking of instances where morphine has been employed for the relief of such suffering as is due to neuritis, cancer or other grievous affections. The treatment of the morphine habit in itself is not considered here.—ED.]

#### A COMPLIMENT FROM "PROGRESS"

"For real good solid push, enterprise, and genius, Dr. Abbott's AMERICAN JOURNAL OF CLINICAL MEDICINE comes right up to the footlights. The January number adds a spot-light, and deserves it. It is the handsomest medical journal we have ever seen. Dr. George M. Gould contributes a thirteen-page article, and everybody reads Gould, because, while at times he bubbles over a little on homeopathy, he is sincere, a polished gentleman, an educated physician and a fluent writer. There are a dozen or more of these original illustrated articles, by the country's best, from end to end. If CLINICAL

MEDICINE should do much more of this we could see but two courses open to it: either go "broke" or get a national appropriation. Wonder if Dr. Abbott thought he would make the rest of us feel like the bushel of cockles? Go it, Brother, you're all right, nothing wins like success and the laurel goes to the brave—but—the *good* get a harp!"

[Isn't that a "peach" of a compliment? We might cover our face discreetly with our hand to conceal the grin of satisfaction which appears upon it when we read a nice thing like that, but modesty not being one of our virtues, we don't. Fact is, we like it. So now! And not being a candidate for a harp—at least not yet—we brazenly confess that we are "out" after more such compliments, for CLINICAL MEDICINE has not stopped growing. As for *Progress*, which is published at Denver, Brother Strickler doesn't need to take a back seat for anybody. It's a success-winner itself, or ought to be.—ED.]

#### A DOCTOR'S AUTOMOBILE EXPERIENCE

Next to advising a man about selecting a suitable wife, comes the delicate matter of advising him about getting or not getting an auto, so in reply to Dr. J. H. Hunt, Glendive, Mont., in January CLINICAL MEDICINE, and to help others of the "family" who may have had no experience with autos, this report is submitted.

The experience here related has not been with any of the machines named by Dr. Hunt's query, but with one somewhat like them in certain features as follows:

An autocar runabout, two-cylinder, horizontal opposed, water-cooled, geared pump, sliding-gear transmission, three speeds forward and reverse, splash lubrication in crank case, ten-horse power, shaft drive to floating rear axle; all enginery under hood in front; 3 1-2 gallons water, 9 gallons gasoline; side (left) lever steer, 28 x 3 inch wheels, 54-inch tread, Diamond clincher tires, dry-cell current; Spitzdorf coil on dash, model 1905; top put on extra.

There came a time in my practice when I saw I must get some method of travel better

and cheaper than livery hire for the work that came to me from out of town; the auto had interested me before this, now I began to count the cost, compared with a horse, with which I had a life-long experience. For data I wrote a doctor friend then using an auto for two or three years in a much rougher country, with worse roads—and a busier man too. From him I got a most thorough report, which favored the auto in every respect. After careful study of gas-engine construction from books and working plants, I then visited my doctor friend—had a good ride over rough April roads—liked his machines (he had two), but when I came to buy I decided that I wanted the engine up in front instead of on the rear axle.

The autocar runabout, built largely on touring-car plans appealed to me, and figures showed the cost of up-keep to be not more than one horse and buggy. I bought and started to learn my auto salvation.

I was given about two or three hours' drilling by the agent, then started to learn for myself. This hazardous lesson was studied for three years without coming to serious grief except minor balks and cranky spells, due to my lack of diagnostic and mechanic resourcefulness.

I used the auto for all out-of-town or distant calls through mud, rain and shine. I always got there and back sooner than estimated at the start; in fact, got along as well as with a horse, using the machine about nine or ten months out of the year and hiring horses as needed during the winter months.

I have kept an accurate account of expenses and find I have got 90 percent of all the travel needed out of the auto, got many miles (600) of pleasure travel over all kinds of roads, wet and dry, hills and level, during the three past years for an outlay of \$250.00. This includes gasolin at 15 to 20 cents, oils and greases, dry cells, overhauling engine after second year, with new brasses as needed, one complete new tire to replace one burst against a curb to avoid accident, repairs to the burst one—three inner tubes the third year (1907), and the many little tinkering jobs I couldn't see how to do myself or lacked

facilities to do, and little expenses like wrenches, screws, bolts, brass, polish, ammeter and so on.

I am certain my auto has cost me less in the three seasons used than a horse would have; the best one can keep the latter for is \$20 to \$22 per month, so it's easy to figure out that a horse would have cost as much (nearly) in one year as the auto has in three years.

The autos asked about by Dr. Hunt should give even better satisfaction than has mine. Some have greater power, others higher wheels, and no water and less weight.

Things I have learned are these: The auto suits me better than horses, costs no more to keep, and can do more miles than any doctor can stand to travel daily, and frees one's mind of all thought of humaneness. The little troubles that vex one so at first become nearly jokes as experience teaches one how to adjust them, and it is safer to have an auto "cut up" than for a frisky and skittish horse to undertake to do as it pleases, usually in a dangerous spot too. My experience has convinced me that to supplant the horse the ideal doctor's auto must have wheels as high as a buggy, cushion tires, power enough to push through summer mud or sand on high gear, yet at slow rate of speed, also reserve power enough to scoot up a little knoll of a few rods' length on high power. It should have the same tread as the wagons common to the region where the auto must travel. An auto should have greater road clearance than a 28-inch wheel gives; many times do stones, ridges of dirt, ruts or sand strike or scrape a rear axle at its low point. A 36-inch wheel with 3-inch tire (pneumatic) would be excellent. (Touring cars now have 36-inch wheels.)

The car I have has vexed me times without number because it would not track with wagons on dirt roads; it is up on one side, down on the other, swaying and sliding in and out of the easy track in sand or mud, thus using up power, cutting down speed, and injuring the machine. It is positively dangerous to ride fast in a machine of narrower tread than wagons, the standard being 56 inches. Such an auto is very hard to guide.

Then on water-cooled engines the radiator is a very essential thing. The one I have is very faulty—way down low in the mud between the front wheels, in front of the axle too; it is delicate in the extreme and has horizontal copper tubes with fins, and three times it has fooled me—thinking them well-drained, when they cannot drain as originally made—they froze, burst and put me into a tinner's bill for soldering.

No man could sell me a horizontal tube radiator again and it would have to be at least well above the axle, out of the worst of splashy mud and less liable to injury. The vertical tube or short (4-inch) square tube (as the Fedder's radiator), so made as to drain completely and easily, is practical.

For muddy weather the broad (3-inch and upward) pneumatic tire is not pleasant nor comfortable to use on the front wheels, while the round or flat treads will wobble and slide sideways in the mud so much one feels uncertain as to where they are going next. One cannot go where one looks, so much of the time that a sudden plunge into the gutter soon teaches one to cut down speed to far less than a good horse would make over the same mud.

This skidding of the front end is not peculiar to small cars; look at any car's track through slippery mud and you might think the driver drunk; but no, he can't help it. It is a queer sensation you feel when the hind end is trying to get around the front end, yet you must keep the right one ahead. It seems to me the high wheel with narrow cushion tire would stop most of this trouble on mud; the tires should cut down through to the bottom, to solid ground; they would follow the wagon or buggy tracks and resist the sliding tendency caused by the pushing power always coming behind them.

The engine up in front is most convenient of all. I should like to try a vertical engine, though the horizontal does the work very efficiently. Air cooling has its many good points and I am told bad ones too; however for a doctor's use it should be less bothersome.

Unless one has some means (gas or steam or hot water) to keep the engine from getting

cold (under 50°F.) it is a hard and sometimes a profoundly vexatious job to start a gasoline engine, especially so if one is in a hurry on a cold day or night. Many a time have I blistered my cranking hand (right) trying to get a few explosions started and have even given it up. A tight-built room the size of the auto, with a gas-jet or hot plate kept burning near or under the engine makes it easy to start in any weather, but beware of water freezing in the cooling system—the best plan is (if radiator and connections don't leak) to use an antifreeze mixture of water and denatured alcohol—and some add a small amount of glycerin.

I find that a good grade of stove-gasolin works well in all warm months, also in winter when the engine is once well warmed by a minute's running. When running through mud, sand or snow some form of grips on rear wheels must be used or you'll stick. (The Weed chains serve me very well.)

The sliding gear (with three speeds) is not all roses, the planetary would do me again; the former is hard to manage. As you approach a hard piece of road at the end of a good stretch, your engine running fast and smooth, you want more power but slower speed and you try to change to middle or low gear without losing momentum. You are almost sure to fail to jump your cogs through one another quick enough and then you hear such an awful grinding in the "inwards" of your auto you are scared pale, sure you have ruined it. Maybe you have, but it is likely you only burred the edges of the cogs, so it will be surer to happen again. When this happens a few dozen times you begin to want a planetary gear, one you can't "bust"—and yet it does the work.

The full elliptic spring is far ahead of the semielliptic. Watch the maker of your car when it comes to replacements. I got made to order two springs for \$3.00 that the auto-manufacturers asked \$30.00 for, and not as good an article at that. Some firms are very fair, prompt and anxious to help you to success.

I also learned that auto repair-men are apparently afraid an owner-driver will learn anything from them, as how best to keep an

auto going right. Watch them, quiz them, stay around and see what they do and just how they do it. Always ask the price for doing a certain thing before ordering it done. I'd never again say "there's something wrong, fix her up." Always try to know what is wrong and order that fixed.

I now think one would do well to go to an auto school before buying. It would save dollars and much annoyance. I find that a 10-horse-power car weighing 1260 pounds when ready for the road, full of gasolin, oil and water, 28 x 3-inch wheels, will do a doctor's work better than any horse; but, if one has a nonmechanically inclined wife or sons or daughters who are certain to want to use the family rig without the doctor to drive—don't get an auto, get a horse. Or if the doctor doesn't like machinery and tools, isn't handy at more or less of the trades—don't buy an auto unless you keep a driver. An auto is no fool's wagon, and must be cared for as any good engineer would his engine, and it will be a white elephant on your hands unless money is no item—then buy promptly.

Twenty horse power is none too strong for the low-wheeled broad-tired auto for a doctor's use. The Maxwell, Ford, Pope, Tribune, Rambler, Reo, Brush, Holsman, Reliable, Dayton and a number of others are worthy of examination and test.

If buying new I should try to get a 20 H. P. two or four cylinder air-cooled 36 x 3 inch wheels, planetary gear runabout, detachable tonneau or a high-wheel car; double side chains to rear wheels of 15 H.P. Any car would have to be 56-inch tread, and I should favor the cushion tire—the pneumatic is too vulnerable. The steering wheel on the left side is the very best place for it; it has many advantages and no disadvantages. Diamond tires have given me three seasons' service without a defect or break due to construction or strength. Columbia dry cells have done as well as any tried.

If you have a friend who knows autos, a second-hand car will save you much money. No country is too steep for the auto if roads are good; they can beat a horse up or down hill. I consider the "auto" a fit companion for "active-principle medication," and the

doctor progressive enough to use one will do well to adopt the other.

However—count the cost well, consider others of the family and the likelihood of their being able to use it safely; remember the roads; if not fond of machinery go slow; don't count any expense too much before deciding on the question; investigate well the cushion-tired high wheeler, for the low-wheel pneumatic is not all the seller will make you believe; make any agent show you through the deepest mud or hills. When you are through investigating and comparing and trying, buy or do not, as your own horse-sense directs you. Take no man's advice, for you pay the bills once you act.

E. D. JACKSON.

New Castle, Pa.

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#### THE DOCTOR'S AUTOMOBILE

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The time is near when the physician is bound to have forced to his attention the automobile problem, and having noticed many inquiries in the medical journals, and having been connected with the trade as mechanic for some years, I may be able "to put next" those intending a purchase in the near future.

What I quote is mainly my own experience, and I shall presume my readers to be ignorant of motor-vehicle construction and therefore I shall use no language sandwiched with mechanical terms.

The special object of this paper is to interest and educate the prospective motorist who lives in the country and in sections removed from the garage and the repairman.

The motorist living near a garage is often ignorant of the first principles of motors; he learns to start and stop his car, and *perhaps* to oil it, and if he also keeps his tank filled with gasolin, thereby not getting stalled far from a supply, he is too likely to think he knows something about automobiles. If anything happens he runs the car, if it will run, until he gets home, and turns it over to the garage people to put into shape. Usually the city doctor stores his car in a nearby garage, where it is kept clean and in trim,



consequently he has little incentive to master what will prove a long course of study.

Were it not for the excellence of the construction of the modern motor-car many more would speedily come to grief than do at present.

Last summer a prominent physician who had had a car for several seasons went to Boston, a distance of 150 miles, and brought back a new and powerful runabout. He stopped at my place for gasolin and I noticed that his car was equipped with a Connecticut coil, which I consider one of the best made.

I remarked to him that he had a fine coil, and he answered: "Well, Doctor, I don't know much about cars, except when they run well, so you'll have to tell me where the coil is." Imagine a man with this-knowledge driving a high-powered car through 150 miles of country and the thing standing up and giving no trouble!

Given a man with a tolerance for mechanics and a good stock of patience, and with a careful study of the book of instructions, which comes with his car, and he will soon master it. He will find that no matter how well he gets along the first year, he will learn a whole lot more the second.

The first rule to sear on your memory is this: When there is any unusual noise, no matter how little, or the least erratic action of your car, stop and investigate and locate the trouble before going farther. It takes patience and study, but in the long run you will know your car. It will do you good service for probably ten years, or until you want a better one; and, lastly, you will have lots of money on hand that otherwise would go for repairs.

Don't sell all your horses but keep enough to do part of your work while you are making a chauffeur of yourself. You will know when the time comes when the horse can leave. One car will do all the work that you can attend to, and it is ready and willing

to do its duty in the hands of the man who practises prophylaxis, but failing in this, through no fault of his own perhaps, can make a prompt diagnosis.

A physician should make a good chauffeur, for the machinery of a car and a human body are similiar.

Which is the best means of propulsion for a doctor's car?

I will not go into a discussion of electricity, though it is an ideal power, but at present out of reach of the average man.



Dr. Lord and Two of His Nurses

This leaves us to choose between steam and gasolin, and I will urge all to get the latter. Steam cars *have* advantages, but these are so few compared with those of the gasolin car that they are not of great account. The steam car is noiseless, has less vibration in running and on a good road it takes one along at great speed and with hardly a whisper except of the breeze. It has great reserve for sudden sprints and bad hills; however, these advantages are closely competed by the modern gasolin car.

Remember that with a steam car you have a steam engine, a fire, and this requires constant care. You must stop to get up steam when a hurry-call comes; you have that fire and the upkeep of steam on your mind while at the bedside of your patient and perhaps wondering if the horde of small boys you left "rubbing" has ventured upon a closer investigation, with probable damage to the

car and neighborhood. Also you are out of it when freezing weather comes.

Now as to the gasolin car: A turn of the crank and you are off. When calling you put the switchplug of the coil in your pocket (but don't forget where) and no one can hurt the machine or start it. I always carry an extra plug in my pocket-instrument case; then if I should loose the other I could still proceed. There is no trouble in cold weather. If air-cooled there is no water to freeze, and if water-cooled a third part of denatured alcohol at 50 cents a gallon keeps it, except in weather far below zero; then use equal parts.

There *are* good and satisfactory air-cooled cars, but they are dear in price and my preference is for water-cooling anyway. Air-cooling is oftimes a misnomer; it is really an oil-cooled car, as the best air-cooled cars are bound to require more lubrication than those of the other variety.

As to the expense: Oil costs money, water is cheap. On a hot day in midsummer your air-cooled car will get mighty hot, and if you go at a good jog the water in the other car will boil at a good rate, but it can't get hotter than 212°F. if the water circulates, consequently this heat doesn't hurt.

This brings to mind the circulation if you have a water cooler: Get a car with a thermosyphon system, no pump, then your water circulates without depending on a leaky pump or its erratic action due to getting its speed from the speed of the engine, which varies, as you may be going fast or slow. The circulation should be uniform at all times to get best results.

Another salient point of a car is its drive, whether by chain or shaft. The chain car will soon be a relic of the past; each year you can see makers of chain cars going over to the shaft-driven style. It costs less to build with chains, but it is poor economy. Chains are noisy sooner or later; they contract or expand with different temperatures; they must be kept well lubricated, which is nasty and the grease is soon soaked with sand and dirt, then the wear of links and sprockets is greatly increased. Chains seem to stretch for no reason at all; jump off while

you hike it back a half mile to find it covering more or less of the landscape.

Shafts are now made with a universal joint, at each end, securing great flexibility, so if the engine is making a sharp turn with the front of the car, while the rear is out of line, the shaft will run as smoothly as if straight.

Buy a car with the engine up front under the hood, then by removing the hood all the machinery is at easy reach; no crawling under the body or hunting from stem to stern for the source of trouble.

With ordinary driving what is liable to happen to puzzle the inexperienced?

To begin with, in the type of car here recommended the trouble occurs up under the hood. Commence at the radiator; see if the water is circulating, if so, your pistons are not stuck from overheating. This is easily tested by removing the spark-plugs and trying to crank. See that there is oil in the crank case and that it is feeding regularly through the sight feeds on the dashboard. Look to the wiring from batteries to coil, coil to spark-plugs and to commutator and the ground-wire which is fastened to the frame of the car. If all wiring is secure, see that the vibrators on coil are working, as oftimes a little piece of grit gets between the sparking points and the one so affected will cause faulty working of its corresponding cylinder. Also if poor oil, or too much, is used the points of the spark-plugs will become carbonized and the explosions will miss. Use good oil and frequently clean the plugs with an old toothbrush and gasolin.

Look to the carbureter to see if it acts its part. If a float-feed, flood it with gasolin by pushing down the pin several times, then if grit has gotten into the gasolin and formed an "embolus" at the spray point, you may wash it out.

Now much of this will be Greek to one with no knowledge of the anatomy of a car, but as soon as you get your instruction book it will be easy to find where the organs reside.

As to the number of cylinders preferable: this depends on the size of the car and usually

the size of the pocketbook. Single-cylinder cars are durable but exceedingly homely and noisy. Usually their engines are slung sideways to the frame of car, under body or at the rear and not easy of access.

For a runabout up to 20 H.P., which is the car for the doctor, I believe in two cylinders of a horizontal pattern, for the reason that two large cylinders will do the work of four as satisfactorily, with the resulting advantages of two less plugs, valves and wiring.

To ride well and evenly the engine should be suspended from three points. You know a three-legged stool sits evenly on uneven ground while one with four legs does not. It is likewise with the hanging of an engine.

One more point: Have your car with a metal body, then if you get a bang resulting in a dent, it can be hammered out, repainted and will not show. It is lighter, stronger and handsomer; does not warp or crack and will please its owner more and more the longer he has it.

As to the buggy-type cars: It seems most manufacturers have been on the jump making the low-body kind and not much attention has been paid to the buggy style with its high wheels and solid-rubber tires.

This kind of car will prove to be popular with certain people in certain parts of the country. Its chief advantage is its cheaper selling price, light weight, good road-clearance and nonpuncturable tires, together with a good rate of speed. It is especially good for the doctor who travels over rough roads. Its disadvantages are numerous, however: It is hard to manage on icy roads, even if chains *are* used on the wheels, as it is top-heavy compared with the low, heavy car. In a low car one can skid around a corner on ice when a buggy car would go over the fence. In going down a hill which is icy, the high car is prone to act funny—to the onlooker.

An especial advantage afforded by the pneumatic tire is the spring furnished the human body. One can ride all day and actually be rested at night, while with a solid or even cushion tire, the fatigue will be as much as that met with in the use of a horse-

drawn runabout, and more too if you go at its limit of speed, about 25 miles an hour on a good road.

One admirable feature of the low, pneumatic-tired car is speed and easy riding. The doctor really wants to impress the public with the fact that in case of an accident a long distance away, he can be on the scene in time to render valuable service in the saving of life. From a selfish point of view he will find out he is oftener called in place of his brother who may live nearer but using a team. The public will think of that in an emergency. You have the speed with you, which does not necessarily mean its use to a limit unless required.

One need not fear about tire troubles, for at an expense of \$50 leather treads studded with hat-shaped rivets can be put over the regular tires, and which are puncture-proof and are nonskidding. I use them the year around, winter and summer, and though they slightly retard speed, it is in so little amount that it is not noticeable. They are applied by anyone and fit so tightly when the rubber tire is blown up that water or dirt can not get in between.

My readers will pardon my haste in writing this short sketch. I am busy and have composed as it occurred to me, but if it is of any assistance to those novices who desire but fear the wiles of motoring, I shall be amply pleased.

L. W. LORD.

West Ossipee, N. H.

### "SKINNED"—AND HE LIKES IT !

When I took up my AMERICAN JOURNAL OF CLINICAL MEDICINE (save the mark! ALKALOIDAL CLINIC sounds better to the old "sub") this morning the first thing that stared me in the face was a renewal blank, which reminded me that another year had rapidly passed by, and also, that to keep in line this year would "smolicate" a \$2.00 bill. Having "skinned" you for a number of years at \$1.00 a year for THE ALKALOIDAL CLINIC, and even beaten you when you raised it to \$1.50, I thought when I read the \$2.00 notice that you were going to turn the tables

and skin me awhile. So I concluded I would just look through the "blasted" thing and see if it was worth the "mon." Before I got half through I could count up \$3.89 worth of value, so I just pulled out a

I used to be "old foggy" enough to think that a doctor's picture at the head of an article was just a little egotistical; but now I think it an excellent thing. It brings us into closer fellowship with the writer, and

that is what we need. If any set of men on earth need to keep close together it is the doctors. Then the home pictures of the doctors is a good feature. It shows us how the (some of them) doctors live. I just had to show the pictures to my wife, and she said, "Pshaw, our house would look just as well as any of them." Sure, bless her. She has been my partner in business for more than thirty years, and without her saving part of what I have earned I doubt if I would boast of a good home.

So plug away, Doctor. You are doing a great work. I shall let you run the journal as you please, for this year at least, and maybe "then some." You can raise the price at will, just so you don't get above \$10.00 a year. So long.

GEORGE H. F. HOUSE  
Indianapolis, Ind.



The Home of Dr. George H. F. House

\$2.00 bill and let it go, for if I had gone on, my tender conscience might get a "billious" spell and no telling how much I might put in.

Brother Abbott, I have never fully forgiven you for changing the good old name of THE ALKALOIDAL CLINIC to the present name of the journal—and to think you did it without my consent or "advice!" However, you have somewhat redeemed yourself in teaching us about the alkaloids and how to use them.

[There are about 50,000 more doctors who should get "billious"—\$2.00 worth! Come on!—ED.]

#### HOW TO ELEVATE THE EYELID

To elevate the upper lid of the eye, take an ordinary wooden toothpick or match, place it just where the cartilage ends in the upper lid (first instructing the patient to look down), quickly catch the eyelashes between the left thumb and index-finger, and while pulling downward and upward,

press the toothpick downward and upward, and presto! out turns the retrotarsal fold where so many foreign bodies hide. It is very easy. I was taught this in '79 by the late grand old professor of Maryland University who lectured on Eye and Ear Diseases—the good old Dr. J. J. Chisolm.

A. TAYLOR EDMUNDS.

Ferguson, S. C.

### CARDIAC STIMULANTS

In a discussion of various aspects of diseases of the heart, before the Medical Association of the Greater City of New York, Dr. Reynold Webb Wilcox presented some valuable information concerning heart remedies.

As regards digitalis, he said that the indications for the use of this remedy were laid down as long ago as 1783 by Withering. It is indicated, as a rule, when the heart-action is rapid and feeble and the arterial tension low, and contraindicated when the heart-action is strong and the arterial tension high. It has some marked defects, the principal one of these being the vasoconstriction which it produces. On this account strophanthus is suggested as a substitute in similar cases. It is less of a vasoconstrictor than digitalis, and has a more rapid action. Dr. Wilcox thinks that it should be used instead of digitalis in cases of children and the aged. Convallaria is found untrustworthy, and adrenalin he considers objectionable on account of the renal irritation which it causes. Erythrophleum, or sassy-bark, is another cardiant of which he has made a careful study. He finds it more active in slowing the pulse and more desirable as a vasoconstrictor than digitalis; in fact more than digitalis and ergot combined, but it is irritating to the stomach. On the whole, while less cumulative than digitalin, it is also less reliable. He thinks that its use should be confined to those cases of fairly competent heart with low vascular tension, in which it would show its effect more rapidly and markedly, and in those cases in which digitalis had lost its usefulness or had entirely failed to secure the expected action.

"There is only one drug," said the speaker, "which increases both the force and frequency of the pulse, and that is cactus. It is especially useful in neurotic heart and slow heart. If an active preparation is used, and such is readily found in the shops, brilliant results are obtained in appropriate cases. In pulmonary edema with heart-failure I do not know of any remedy as good as hot coffee given by high rectal injection. By combining with each dose half a grain of caffeine sodiobenzoate we could get along with much less digitalis than otherwise. Strychnine is sometimes of service in cardiac disease, but one difficulty with it is that patients readily become habituated to its use."

This is certainly valuable and trustworthy information from a man whom many esteem an authority on this subject.

### TWO DESPERATE CASES AT THE EXTREMES OF LIFE

Just to show you what can be accomplished with the active principles, I will relate two incidents that occurred in my practice recently:

Case 1. I was called to see an old lady, aged some eighty years. The son, who stayed with her, stated that he had gone to call her, according to custom in the morning, and found her lying on the edge of the bed with her feet on some chairs, cold and unconscious. He had gotten her back in bed, put hot irons to her feet and a hot drink down her throat, when he sent for me.

I found her lying unconscious in bed; I could get some mumbling but no intelligent answers. My first thought was of apoplexy, with resultant paralysis, as she lay without moving. I also thought there was not much use to do anything as she was old and very likely paralyzed. But remembering some experience I had had before in active interference, even in apparently hopeless cases, I decided to do something even if she did die. So I dissolved some granules of elaterin in a teaspoonful of water heated over a lamp—and by the way, when there is no hot water put your granules in a teaspoon-

ful of water and hold them over the chimney of a lighted lamp; it's the quickest way to dissolve them.

I gave her in all six granules of elaterin, gr. 1-6 each. Her pulse was rather strong, face not very red, and so I left her. In the morning I found that something had happened in the night. The bowels had acted some six or eight times and were acting yet with a profuse watery discharge. Instead of an unconscious paralytic there was a rational conscious patient with power of motion. I put her on effervescent saline laxative in the morning, with nuclein, 5 drops, every two hours, and some digestive granules before meals.

I now turned my attention to some chronic leg ulcers which were quite bad, using a dusting powder of acetanilid and boric acid at first. She continued to improve for about a week, when one afternoon, as I was there, she took a violent chill and became unconscious again. We relieved the chill with hot water bottles, and atropine and glonoin. I gave three blue mass and soda granules, gr. 1-2 each, and this was effectual. For her strong pulse I gave veratrine, gr. 1-134, two granules dissolved in water; later, one at a dose two to three hours apart, this being enough to keep the pulse soft. The next morning she was rational as before. I used this remedy for several days and also gave nuclein as before and stillingin, gr. 1-6, phytolaccin, gr. 1-3, arsenic iodide, gr. 1-67, between meals and at bedtime.

Thinking her chill came from the absorption of the acetanilid used on the open ulcers, I discontinued it, using pure boric acid as a dusting powder. After washing with a little creolin in water, I dusted the powder on the sores and then covered them with gauze wet with olive oil. There was an eczematous, scaly condition of the skin and the olive oil kept it moist and softened. In about three weeks the crusts on the sores fell off leaving them healed. One large one I finished up with a little of Merck's oil of turpentine and with dolomol-ichthyol used as a dusting powder. The patient made a good recovery and now the ulcers are entirely healed.

Case 2. Infant, aged about two months. I found a puny, weak bit of humanity lying in its mother's lap. Its history was that it had had a normal birth, but had been intensely jaundiced soon after birth and had gradually been losing weight and strength ever since. It was coughing some now, with a rapid pulse and respiration and some elevation of temperature also. It lay with eyes closed, listless and apathetic. I gave calomel, gr. 1-10 half hourly for six doses, and dissolved one granule of aconitine, gr. 1-134, and a little cactus in twenty-four teaspoonfuls of water. I gave a teaspoonful of this every half hour till the fever went down.

The child's condition was about the same the next day, but in the night I was hurriedly called, as it was reported dying. When I arrived I found the child in a state of collapse, hands and feet cold, scarcely any respiration, and apparently almost gone.

I should state that the fever mixture had not been used lately, not much being required. Thought I, to myself, "Here at least is a case that is a goner. There is no use giving it anything." But I decided to do something, anyhow, and dissolved a granule of glonoin and half of one of brucine in a teaspoonful of water and poured it into its mouth. Then I dissolved a granule each of glonoin and brucine in twenty-four teaspoonsful of water and directed that a teaspoonful of the mixture be given every three hours, and I left, not much expecting to find it alive in the morning. To my surprise it was reported better, and on calling I found it to be so.

A granule of brucine in twenty-four teaspoonfuls of water was left at this time and a teaspoonful ordered given at three-hour intervals; also nuclein solution, 5 drops, and echafolta, 3 drops, were to be administered every two hours. Bovinine was given, 5 drops in milk, every three hours, to be increased every two days. I continued this medication for several days, and kept up nuclein and bovine with calomel every other night, enough to act on the bowels. I gave nuclein and bovine for several weeks. The child soon began to improve.

I had the parents rub it with warm cod-liver oil, morning and evening, and it is taking bovine yet. As constipation troubled I gave a teaspoonful of olive oil between meals and later substituted the same amount of orange juice. The child soon began to fill out its wrinkled skin and the latest reports are that it is getting fat.

LUTHER WALL.

Wapello, Ia.

[It's really wonderful what can be done for these seemingly desperate cases when a doctor gets hold of them who puts real energy and sympathy into his work—with the determination to find the disease-indications and to meet them. Never say die, Doctor! Do something, every time, and you will cheat the undertaker out of many a job. The "expectant" plan is mightily unsatisfying to a patient who is apparently *in extremis*.—ED.]

#### CLINICAL MEDICINE "THE BEST EVER"—APPENDICITIS

We are still getting compliments on the recent numbers of CLINICAL MEDICINE, especially concerning the January number. A Michigan correspondent, who prefers to remain "incog," has this to say:

"As to my opinion of the January CLINIC I can only bow in admiration and murmur, 'The best ever.' It certainly is the best yet, not only in the selection of reading material, but also as an excellent example of mechanical skill in illustration and arranging the articles in attractive form.

"In my opinion, the article of Dr. Blesh, on 'Appendicitis,' is the best of them all. If every reader made it a point to carry out the teachings of this paper in his every-day practice, we would see a marked reduction in the mortality rate from this disease. That 'there is no medical treatment' should be borne in mind when called to any appendical case. Operate at once, if you are able; else call in a surgeon. Pain, then vomiting, tenderness more or less diffuse, becoming localized in from ten to twenty-four hours, muscular rigidity—these are the

landmarks. Pulse and temperature should not be considered in the early stages. When these indicate a grave condition the patient is generally beyond surgical aid, for the local conditions in and around the appendix are usually far advanced before they are shown by the pulse and temperature.

"A sudden cessation of the pain is also a bad omen, indicating gangrene of the appendix. A pain that has become bearable but suddenly becomes acute, and gradually ceases, indicates perforation. When one has nausea or vomiting first, then pain, he can usually safely eliminate appendical involvement. Pain first, then nausea, not nausea, then pain.

"Operation in the first twenty-four to forty-eight hours is generally attended with recovery. But enough. I wasn't asked to open a discussion on appendicitis. I wondered ere I knew."

This short letter is full of valuable "pointers" which every reader of the CLINIC should be eager to take advantage of. We can't just agree with Dr. Blesh and the writer anent there being "no medical treatment for appendicitis." But that is "another story"—as you will see explained elsewhere in this number.

#### APPENDICITIS: IS IT ALWAYS A SURGICAL DISEASE?

Having read the article written by Dr. A. L. Blesh on the above subject, I am prompted to report my experience in the treatment of this much-talked-of disease. I have been engaged in active practice since 1875, during which time I have seen and treated many cases of appendicitis. In my early practice we called the disease typhlitis, or inflammation of the cecum. Some treated it by giving opium and applying fomentations. I usually gave epsom salt or castor oil, preceded by a few doses of calomel, until the bowels were thoroughly emptied, using an ice-bag to allay pain and inflammation.

My opinion was that the trouble was caused by fecal accumulation in the cecum, and would subside on its removal. My patients invariably made quick recovery, and

I never had a case where an abscess formed or one that had to be operated upon. Now and then some physician would report a case where pus formation took place, which he proceeded to lance and let drain out. Soon his patient was well and there was no more to it.

Nowadays I treat a little differently, using ten or twelve small doses of calomel, followed by epsom salt, or other saline laxative, to empty the bowels, after which I freely give as an intestinal antiseptic the three sulphocarbolates. Where much pain and tenderness exist I use an ice-bag applied over the seat of pain, and give codeine, morphine or hyoscine-morphine combination tablets. In my thirty-three years of practice I have never lost a patient with this disease or had one operated upon. Twice in consultation I have seen cases in which we removed the appendix, and they both died, one on the third, and the other on the fifth day after operation. I neglected to say that where fever is present to any extent I control it with aconitine.

I believe where cases are seen early and properly treated, that nearly all are curable by medicines. Of course, if we are out solely for the money that is in it, operation is the thing. Reports by the surgeons in the French army show that just as many cases recover that are treated medicinally as do those that are operated upon. I know of a certain surgeon who calls every belly-ache appendicitis, and who has operated on some four or five cases within the last year, with a mortality of 50 percent. One of his patients whom he was anxious to operate upon fell into my hands. I found the woman suffering from hepatic colic, which I soon relieved and had her performing her household duties.

I do not deny that now and then an abscess will form, but if there does, just open it and use drainage, and all will be well. Many surgeons have surgery so instilled into their minds that they never try any other treatment and, consequently are not competent to give an opinion. I am a believer in medicines—especially when the positive-acting active principles are used. The old-

time doctors believed that certain diseases had a definite course to run, and that medicines could do no good, which served to throw drug-medication into disrepute and allowed surgery to try to do what should have been accomplished by energetic, properly applied medicinal treatment.

I am aware that I am not in harmony with the general opinion that appendicitis is wholly and solely a surgical disease, but my experience is that surgery should occupy a secondary position. Surgery has won many wonderful achievements in recent times and I am a true friend to surgery when properly applied, but I want to see medicine given a chance too. If physicians will study their cases and get a thorough knowledge of therapeutics they will be able to combat disease in a manner surprising to themselves.

R. H. ENDICOTT.

Oakdale, Calif.

[Let us "render unto Cæsar!" Modern surgery has achieved great things, and we are all proud of it. In appendicitis particularly we owe much to the American surgeon. But that fact doesn't eliminate the general practitioner or make his services useless in treating this disease—not by a jugfull!—ED.]

#### THE MEDICAL TREATMENT OF APPENDICITIS

I would like to give you my experience with appendicitis. Our surgeons say there is no medical treatment for appendicitis, and undoubtedly they believe it. My experience has been very much to the contrary. I have found all cases of sudden and sharp onset with very acute symptoms to be very amenable to vigorous and energetic medical treatment. None of these very acute cases are suppurative at the beginning, and if the inflammation can be aborted before any pus forms (and it can) why operate?

These are the cases in which to use the "head-off-and-eliminate" treatment vigorously, rapidly and intelligently.

I have treated twelve cases of appendicitis where the diagnosis was positive and the



symptoms exactly those laid down in the textbooks. The first case had been treated as typhoid fever by another doctor for a week before coming into my hands. It was plainly an operative case and had been from the start. I sent the man to the nearest hospital at once, and he was operated upon immediately, revealing a very large appendical abscess and a gangrenous appendix. The man died within twenty-four hours of general peritonitis.

The other eleven cases I had charge of from the first and succeeded in each case in conquering the inflammation within forty-eight hours. These were the cases with violent diffused pain, centering itself under McBurney's point within a few hours, with abdominal rigidity, board-like hardness, peritoneal facies and quick hard pulse.

I gave these patients the specific, or normal, tinctures of aconite, bryonia, and belladonna in broken doses every half hour, also a 1-10-grain tablet of calomel every hour till the bowels began to move freely, and last but not least I applied very hot flaxseed-meal poultices, changing them every fifteen minutes. I can imagine I hear our surgical friends say, "Doesn't the poor man know that warmth encourages the growth of germs?"

Yes, Doctor, a moderate degree of warmth does, but a very hot application *does not*, most decidedly. I have more than once seen a suppurative tonsillitis or quinsy aborted by very hot poultices applied to the sides of the throat.

With some patients it is necessary to give one or two doses of magnesium sulphate, following the calomel, and some are the better for flushing the lower bowel with large enemas of warm water. The essentials are to have your medicines given with the most perfect regularity and to see that your poultices are kept very hot all the time. Let the patient have plenty of water, but not a mouthful of food of any kind till all the acute symptoms have disappeared.

I want to describe just one of these cases: Mr. M., age 21, college student, rooming in a large dormitory, called me Saturday evening. He had a typical case, just as des-

cribed in the textbooks; was in very great pain. I told his student friends what ailed him and that the disease must be conquered before Monday morning or become operative. They offered to carry out any treatment I wanted, and did so very faithfully. Sunday morning when I called he was free from pain, had a good soft pulse, and his bowels had moved freely; the abdomen was "as red as a boiled lobster" where the boys had poulticed him. Monday morning he sent word that I need not come as he felt almost well. Net proceeds for the doctor, \$2.50; but the result was very good for the boy.

In conclusion I want to put in three "don'ts."

1. Don't give morphine. It will mask the symptoms and deceive you. The treatment I have given soon relieves the pain, and it is curative.

2. Don't try to use medical treatment if you have reason to believe pus has formed. The great purpose of medical treatment is to cure the inflammation without allowing pus to form.

3. Don't think you can derive any benefit from poultices merely kept warm. The other doctors around me usually treat appendicitis by constant applications of ice-bags, no food or drink except cracked ice, perfect quiet and no medicine. They generally succeed, but their cases progress toward recovery only about half as rapidly as my cases have done so far.

WM. M. GREGORY.

Berea, O.

[In spite of the opinion of our friend Blesh (and many of our other surgical friends) we agree with Dr. Gregory that a very large percentage of cases of appendicitis will do better under medical treatment than they will under the knife. That the method of treatment above described is good is shown by the results. As for ourselves, we prefer to rely chiefly upon hyoscyamine and strychnine arsenate, as recommended in these columns some years ago by Dr. Zophar Case. A decided elevation of temperature of course suggests the use of aconitine. As Dr. Gregory relies largely upon aconite and belladonna,

the analogy between his way of treating this disease and our own will at once be apparent.

In every case of appendicitis we should secure, if possible, (1) a clean bowel and (2) a quiet bowel. If the patient is seen very early there can be no objection to a good "clean out" with the saline—one that will act quickly and be done with; if later, then principal reliance should be placed upon the high enema, which is indicated, anyhow, in most cases. To keep the bowel at rest perfect—absolute—quiet is imperative; the antispasmodic action of hyoscyamine is just what is needed, to supplement this, since it arrests the activity of the unstriated muscles of the bowels and relieves the pain and discomfort without the accompanying dangers and masking of symptoms produced by morphine, which is not to be used.

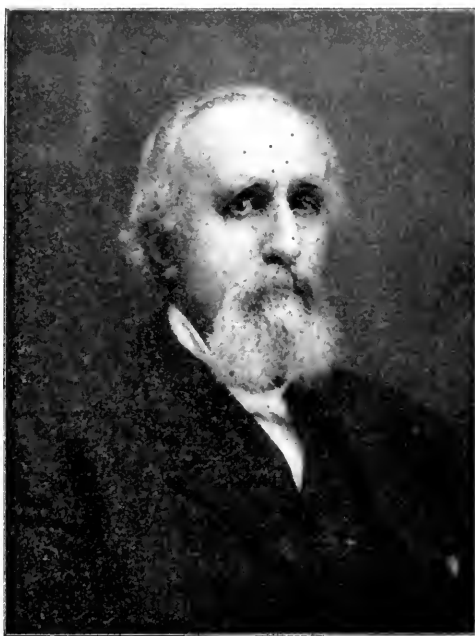
Of course, in every pus-case, or whenever there is a tendency to recurrence the patient should be referred to the surgeon. No "rotten" appendix should ever be left in place to work more trouble.—ED.]

#### THE GRUESOME GUEST CHAMBER AND THE "SPARE BED"

On Monday, Dec. 23, Mr. Joab Hoovler, an old patron of mine, came to my office with his wife, who desired some optical work done. He and I had a talk about old times. He said he was 88 years old, had rented his farm, and that they were "taking things easy;" that he had never had any serious illness. He was the picture of health and in the best of spirits.

After leaving the office they went to relatives in town, where they stayed all night and slept in the "spare bed," between sheets, instead of the blankets to which they were accustomed at home. On Tuesday evening they went home by train to Utica, eight miles, thence, one and a half miles, in a covered carriage. That night he was taken with acute pulmonary congestion and two days thereafter his wife was taken with the same disease, in milder form. He died on Saturday morning. I learn that she is recovering.

His father was at Braddock's defeat, in the capacity of teamster, when eighteen years old, and, being a noncombatant, Washington told him to "cut the traces and go"—which he did with alacrity. He was 83 when Joab was born, and Joab should have lived to round a *hundred*. The spare-bed, did the business and shortened his life!



DR. J. R. BORLAND

The Doctor is himself eighty years years old—  
and as active as ever

Several times in my life I have been "up against" a cold, spare-bed, and have got into said bed with all my "duds" except hat, coat and shoes, and thus escaped taking cold.

Every ambitious housewife takes a laudable pride in having a guest-chamber and spare-bed for the comfort (?) of visitors, but often overlooks the fact that the bed may be *damp and cold*. In some cases there is no way to warm the room and bed, when a warming-pan, smoothing iron or water-bag, should be employed to warm the bed before the guest retires.

Winter is a bad time to "go visiting," by reason of the great danger of contracting colds. To my knowledge the "spare bed"

has been a death-warrant to many. Thoughtful care on the part of the host will obviate such dangers and make life more enjoyable.

Since writing the foregoing I met a friend and spoke of the Hoovler case. He said that many years ago he taught country district schools for six years and "boarded around," and that during that time, he seldom knew what it was to be free from a

and not only that, but is in a condition to do better work.

More might be said on this (as I regard it) important subject, but I have said enough, I hope, to interest the reader in this subject.

J. R. BORLAND.

Franklin, Pa.

[All that Dr. Borland says in criticism of the "spare bed" we can fully indorse, and no doubt hundreds of the "family" could tell similar stories of sickness and death traceable to this housekeeper's pride. But one part of the doctor's story we challenge *anyone* to duplicate, that of this father of 83, leaving a son to die at 88. Two generations covering a period of 171 years—think of it! One life reaching back by word of mouth to Braddock's defeat in 1755. That's something which seems almost beyond belief. How brief is life—and yet how long!—ED.]

#### ATROPINE IN HEMORRHAGE

As you have asked for reports of common cases I herewith enclose the reports of two cases, the treatment of which and the study upon which gave me much to think upon.

I graduated from my medical college in 1903 but for the most of the time since until the late fall of 1906 I was not in active practice. When I took up active practice you may know that I was rusty to say the least, so if my errors were too foolish they should be excused on the ground of little experience. I certainly was "up a tree" in Case I; but I did the best I could, and "angels can do no

more." These reports are not intended for instruction to old practitioners, but if some beginner can be encouraged to take heart and plod on, even if he does get a case or two that will tax his knowledge and ingenuity, the writing will not be in vain. He can see that there are other "plodders;" and if he is not already a believer in active principles



JOAB HOOVLER

Taken when he was seventy-five. Mr. Hoovler, who died in December, aged 88, was the son of a man who served under Colonel George Washington, at Braddock's defeat, in 1755

cold. I can corroborate him, for such was my experience when I taught district school, many years ago.

Happily that custom of the teacher "boarding around" has, in most sections, gone out of date. Now the teacher receives better wages and can have one regular place and not be subject to change in room or bed,

he had better be converted soon or he will be a plodder longer.

I took up the study of the alkaloids in December, 1906, and while I did not use many of them I used a few of them very effectually. But necessary is time and experience in all things, especially in medicine. I am gradually finding use for more of them (the active principles) and seldom am I disappointed; in fact, in some cases I am astonished at the results that drugs can bring about.

I recently discharged a little fellow who has passed through an attack of acute Bright's disease, complicated with a pneumonia of the middle lobe of the right lung. I treated him almost entirely with the alkaloids. I used antiphlogistine on the chest and over the kidneys after an attack of hematuria. I used the dosimetric trinity for fever; atropine and hydrastin for hematuria, brucine as a stimulant, arbutin for albuminuria and finished up with the triple arsenates with nuclein. When the urine was scanty I ordered spirit of nitrous ether and tried to use a solution of potassium citrate, but the patient objected so much and took so little of what I ordered that I discontinued its use. His last few samples of urine show no albumin and he is getting fat and healthy.

In one of the journals I recently noticed a call for reports on the use of atropine in hemorrhage. I can recall two cases where I have used it, with the following results:

Case 1. An old Hebrew lady who had diabetes. I was called to her home in a hurry one evening as she was expectorating blood—not much, but enough to scare her. I gave her morphine, gr. 1-12, for a few doses to quiet her, and atropine sulphate, gr. 1-250, every half hour for a few doses, then every hour until bleeding ceased. It lasted a few hours after I saw her before it stopped. I was called once again some weeks after the first attack to treat a similar condition and I again used atropine and this time I used hyoscyamine with it and I did not give the atropine so often—not more often than every hour. I thought I got fair results from the atropine. I ordered cold clothes to the chest, too. The patient was always

all right the next morning after my visit in the night.

Case 2. A young Hebrew woman who was having severe hemorrhages from the lung. I gave her a hypodermic of morphine, gr. 1-4, atropine sulphate, gr. 1-150. Then I gave several doses of atropine sulphate, gr. 1-500, and hydrastin, gr. 1-6, about every half hour for several doses and left her taking the latter drugs every hour. She had let up when I left but was repeating the performance the first thing in the morning after her usual spell of morning coughing. She responded no better to a prescription containing stypticin, powdered suprarenal gland and codeine—in fact this did not stay on her stomach very well. This was ordered by a consultant who was called after I was, in a hurry. I was out when the call came but reached the patient a minute or two before he came, so we talked the case over and he ordered this favorite of his. This was a Hebrew doctor.

Later I was again called, and before I could reach her another man was called and I allowed him to try his favorite prescription. His was calcium lactate. I did not follow the case after this because she was taking too many doctors' medicine. She had called in another friend's doctor after my first consultation and had taken his medicine too. That is, she took a little of each man's medicine. They were all Hebrew doctors except myself. I could not blame her much for she was in a pitiable condition and feared death so much, and they cannot seem to overcome their inherent flightiness.

C. F. ABBOTT.

Brooklyn, N. Y.

[Don't give atropine and hyoscyamine together. The action of the two remedies is very much alike—so much alike that many consider them identical. Both remedies are powerfully antispasmodic, but hyoscyamine is more sedative and more decidedly hypnotic than atropine. Otherwise they are very much alike in action.]

There is no doubt in our minds that atropine is *the* remedy for hemorrhage—that is, the general remedy for visceral hemorrhage

from such sites as the lung, kidney, intestine, stomach, etc. Of course there are conditions when other remedies are indicated: for instance, the oozings from the uterus suggest hydrastinine; from the lower bowel, hamamelin; and the "bleeder" should have the calcium salts; in accessible localities, where the surgical dressing can not be used, an astringent or styptic may be applied. But for most cases of internal hemorrhage use atropine, preceded in urgent cases, where something must be done quickly, by glonoin. By these two remedies we dilate the skin capillaries, relieving thereby the internal congestion at the bleeding point, bringing the blood to the surface of the body.

Let us have more reports of the use of atropine or hyoscyamine in this class of cases.

By the way, Dr. Abbott suggests a discussion of the relative advantages of city and country, as a doctor's location. We fear it will be hard to solve to the satisfaction of everyone. What say you, Brother? To us it seems that the advantages are pretty much all on the side of the country. But perhaps it is the old story of "yonder grass"—over "yonder" the grass is a little greener than it is at home!—ED.]

#### PRURITUS ANI: HERE'S A CHEAP REMEDY

Having been a victim of this most distressing and stubborn complaint and having tried all the best-known remedies and procedures, locally and constitutionally, without results, I cannot keep from putting my confreres in possession of a remedy which at last has fully cured me. This remedy is simply purified yellow or blue clay, which is dissolved in water and freed of sand by repeated elutriation (washing) and finally left to settle, the supernatant water being poured off. The moist magma of clay is applied, after a good bath, as a plaster covering all the affected area and even introducing some of it into the rectum, thoroughly inuncting the walls, this to be repeated every six or twelve hours. This treatment brings such a relief to one suffering with this dis-

order that can be appreciated only by one who has been tortured with it for a long time.

Clay is some form of a silicate of aluminum and possesses the astringent and absorbent property needed in the relaxed tissue producing this prurigo, and as it shuts up the laminæ, thus stopping the oozing out of an acrid plasma, does away with the source of the trouble and so effects a cure.

Here let me tell you of the antiphlogistic property of clay; not the clay brought from a far-away land, but just the common clay dug near home. It acts like a charm upon inflamed joints and nipples, or boils or sprains. Try it, Brethren, and be convinced. If you have a very painful neuralgia and mix the clay up with a little cider vinegar, you will find it a great benefit, stopping all pain in a very short while.

Nature has many remedies which are but little known, yet are of the greatest importance in the treatment of disease. Of course you should not rely upon these natural remedies altogether, but I would suggest trying them first, and then go to your medicine case which, when fully supplied with alkaloidal remedies, in very many cases makes surgical interference superfluous.

When our forefathers under Hahnemann drifted away from the old teachings of Paracelsus, Galen and Esculapius, founding the teaching of *similia similibus curantur*, adopting the almost infinitesimal dose of a remedy, and leaving out the inert matter, they had no idea that an Abbott of Chicago gradually would mold after their pattern, and perhaps accepting the idea of *similia*, would adopt the idea of perfecting the alkaloids of the remedial agents, the very active principles, and then give these in cumulative doses, thereby enabling the physician to hold under his thumb the effects produced, and verily enter upon a new field of curative medication. Whosoever wants to be successful with the alkaloidal medication must be thoroughly versed with symptomatology, as well as materia medica and therapeutics, and he will at all times become master of situations much quicker than when following the old fashion of prescribing the elixir of this, pills of that and electuary the

other. Therefore, Brethren, let us advance and forever help in the onward flow of progress and be in the front ranks to build a monument to one, our Dr. Abbott, who through many years of toil has verified his teachings.

WM. LAMBERT.

La Crosse, Wis.

[Clay is a remedy certainly within the reach of anyone. And that it is a good one the success of the clay pastes, official and unofficial, is proof enough. In treating your cases of anal pruritus do not forget that the cause may lie within the bowel, as the passage of infrequent hardened scybala or acrid, irritating semi-fluid stools. "Keep clean" with a saline or other laxative and look out for external causes of irritation—meaning, keep the whole anal region clean. In children be on the lookout for seat-worms; in adults for the rheumatic or gouty diathesis, or diabetes.—ED.]

#### APOCYNIN FOR SORE FEET

I have had such good results from the use of apocynin in cases of lame or sore feet that I want to have some of the other contributors to THE CLINIC try it and report. In cases where the patient seems healthy in every other way, but complains that his feet pain him, so that he can hardly stand or walk, I give about four doses a day, the last one at bed-time.

GEO. E. SMITH.

Cooperville, Mich.

[Has anyone else observed this action of apocynin? How do you explain it? It's an interesting observation and worthy of investigation.—ED.]

#### GOOD THINGS IN A BOOK AND JOURNAL

Of the making of books there is no end and unfortunately a great many books are written which better had never been created. An old rule for the author runs, "Be sure you have something to say before you start

in to say it," and granted that the writer has some information to give and is possessed of the faculty of conveying his ideas to others the main requisites for the production of a book are at hand.

Dr. J. D. Albright, whose prior book "The General Practitioner as a Specialist," has proven of incalculable value to so many physicians, produces a volume when he has something to say, and only then. Furthermore, he has the faculty of conveying his ideas in concise, pleasing, picturesque language; moreover, when Albright finishes his subject he ceases to write—no useless verbiage for him.

Dr. Albright's latest book, "Business Methods of Specialists, Or How the Advertising Doctor Succeeds," is a small volume of one hundred pages, but in that hundred pages he gives us a brief picture of the advertising specialist and his methods. He not only points out all that is fraudulent in the advertising doctor's methods but impartially and with clear perspicuity calls our attention to the many excellent things he does do. Every general practitioner may learn a good deal from the advertising specialist when he comes to "booking the case," i. e., accepting a new patient, and the strict business relationship which subsists between the advertising doctor and his patient should also obtain between the regular physician and his clientele.

Dr. Albright shows us the advertising "case-taker" at work, and then in plain graphic terms describes the methods of practice adopted by the average advertising specialist. It will benefit every doctor to read Albright's work, and we are inclined to think that the advertising man will benefit by seeing himself as others see him.

"Business Methods of Specialists" can be procured from the author, Dr. J. D. Albright (Editor of *The Office Practitioner*) No. 3228 N. Broad St., Philadelphia, Pa. Price, \$1.25.

And right here we are going to take the opportunity to say something of Albright's journal, which certainly stands in a class by itself, covering a field which it will pay every doctor to cultivate more closely, for what

doctor would not increase the quantity as well as the profitableness of his office work. The editorials in the *Practitioner* are fearless, incisive and straight to the point. What Albright wants to say, he says—and he “truckles” to no one. In the February number his “Friends from ‘Kaintuck’” is a peach—worth a year’s subscription. Have you read it? That’s only one of many good things in the February number, which contains articles on “Chronic Proctitis,” “Cancer and its Successful Treatment,” “Pain in Rectal Disease,” “Treatment of Cystitis,” “Burning of the Feet in Prostatic Trouble,” “Styes,” etc. The journal is a good investment.

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#### ANOTHER WORD OF ENCOURAGEMENT

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I have read your article in *The Journal of the American Medical Association* and am much pleased with the statements made in your letter. I am only a “small fry” but I can add my little to the total of encouragement that comes from friends. I dislike to jangle, but when a man who is doing his utmost in my interest is attacked and he puts up a defense such as you have I can throw my hat as high as anybody.

I am a member of the A. M. A. and an admirer of the journal and its propaganda in general, but not of its venom when directed into such an unwarranted attack against those who have alone stood for truth, as I believe, for the very truth’s sake. I may say that the February number of CLINICAL MEDICINE is the most helpful number yet of that most helpful to me of all medical publications.

B. T. GREEN.

Brookings, S. Dak.

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#### BRYONIN AND BAPTISIN: ARE THEY HOMEOPATHIC?

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I have just read the article by Dr. John Benson, Colfax, Wash., which you rightly characterized as “splendid.” Do you know Doctor, that the principal remedy prescribed in each of these cases, bryonin for John Doe and baptisin for Richard Roe, is exactly

homeopathic to the case and is just what any careful homeopathic physician would have prescribed? As I read the symptom-complex of John Doe I said, bryonia, and when I came to Richard Roe’s case I said, baptisia.

I tell you, Doctor, when the medical profession is willing to work together in one complete solidarity, each wing being ready to accept whatever of good another has to offer, the public will fare decidedly better. You, for example, have a good contribution in the active principles; the homeopaths have a good contribution in the scientific study and proving of drugs; and the allopaths—pardon me, the regulars—have done nobly in emphasizing a correct diagnosis. Dr. Benson has combined these three factors, and see the result—a well-informed, careful and competent physician.

I have been watching your progress in active-principle therapy for a number of years, have tried these preparations a little, but not sufficiently to be as yet convinced of their universal superiority to our properly prepared homeopathic remedies. But I am convinced that the principle is right.

Now, Doctor, if you will take up a systematic proving, or testing, of the active principles, according to the method of Samuel Hahnemann, and publish your results in attractive form, you will have added yet one more reason for gratitude to your already long and enviable list from your fellow practitioners and humanity in general.

May your life be spared until you have achieved this work, and many years thereafter, to see its general adoption by the profession.

E. E. LUSK.

Keota, Iowa.

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[It may be of interest to you, Doctor, to know that Dr. Benson by education is a homeopath, hence his choice of remedies in these cases is natural enough. At the present time he practices almost entirely with the alkaloids and active principles. He finds no difficulty apparently in bringing these two ideas into accord. We are willing enough to admit that there are many splen-

did things, many things which should be adopted by the medical profession as a whole, in the teachings of the great founder of your school, Hahnemann. The homeopathic proving of remedies is certainly something worthy of consideration by the best of us, though we do not feel that it is exactly in our line. However, we give our readers an opportunity to express themselves concerning the possibilities in that direction. — ED.]

#### BRYONIN: A CRITICISM OF DR. BENSON

IN THE AMERICAN JOURNAL OF CLINICAL MEDICINE for February is a very interesting article by Dr. John Benson, entitled "Specific Medication and the Alkaloids." I agree with the editorial comments that it is "crowded full of practical wisdom." It is an illustration of the success to be had by treating diseased conditions, and not merely firing off a lot of remedies at a name of disease. All are familiar with the books, "Specific Diagnosis" and "Specific Medication" by the late Dr. John M. Scudder, the celebrated eclectic author and physician, and especially all who have put his teaching to practical tests at the bed-side, will at once perceive that the remedies used by Dr. Benson in his two cases of typhoid fever were indicated by the symptoms present, and to all such it is well known that bryonia is the very best remedy in inflammation of serous membranes. But without being hypercritical, I, and doubtless others of your readers, would like to ask the doctor if he does not think that he is making too great a demand upon our credulity when he asks us to believe that bryonin "has a special affinity for the right side, right lung, etc.," thereby implying that it has no such affinity for the left side, left lung, etc.?

That bryonin may have, and does have, a special affinity for serous membranes, while it has no such affinity for mucous membranes, occasions no surprise; we are familiar with the fact that certain remedies have an affinity for certain organs, but this is an entirely new and different proposition; we are asked to believe that a remedy (bryonin) will

meet a certain indication of disease in the *right* lung but not in the left lung.

So far as I know, both lungs are constructed exactly alike, the same tissues enter into the constitution of each; both receive their supplies, either of nutritive material or remedies (in case of sickness), from the same source, the blood. Then can it be true that simply because one organ is on the *right* side of the body bryonin will be the remedy, and because the other corresponding organ is on the *left* side, bryonin cannot be the remedy? It is well known, of course, that one remedy will act on muscular tissue, another on serous membranes, another on mucous membranes, another on nerve tissue, but to say that a remedy that will act on one lung will not act on the other lung simply because the latter happens to be on the left side of the median line, is, it seems to me, asking us to believe an absurdity. Dr. Benson evidently has read Dr. Scudder's books, but if Scudder ever asserted that bryonia would manifest an affinity for the right lung and not for the left lung, I have never seen it, and I have read most of his books, though I was never inside of an eclectic college in my life.

WM. W. MURRAY.

Suffolk, Va.

[This is pointed criticism and deserves a frank and full reply, which we are glad to give Dr. Benson opportunity to make for himself in the article which follows. Many of the readers of CLINICAL MEDICINE must have asked, mentally, the same questions here expressed by Dr. Murray. Without further comment we shall give the floor to Dr. Benson.—ED.]

#### BRYONIN: DR. BENSON'S REPLY

The sole object for which my articles in CLINICAL MEDICINE were written, was for the purpose of emphasizing the necessity of a closer study of the individuality of the patient, in place of the disease, as well as an equally close study of a remedy to correspond to that patient. It was also coupled to a hope that they would excite and cause some criticism and articles from the readers of the



journal. I consider that any article published, that is read and passed over without criticism or comment, pro or con, might as well have been left so much blank paper, so far as usefulness to the profession is concerned.

Had I had any doubts of the journal being perused and digested, they would have been completely expelled by the numerous letters received, and the various recommendations and commendations therein contained, and I therefore welcome Dr. Murray's kind and friendly criticism of my article—and the generous offer of the editors for space to answer his and many other critics on the subject.

Dr. Murray says:

"But to say that a remedy that will act upon one lung will not act upon the other lung, simply because the latter happens to be on the left side of the median line is, it seems to me, asking us to believe an absurdity."

In this I agree most perfectly with Dr. Murray. It is an absurdity, but—I made no such statement, nor asserted anything of the kind.

What I did state was that bryonin had a special affinity for the right side, but that is not stating, by any means, that it had an exclusive action for the right side only. Nothing for or against was said of the left side. Two factors entered into my prescription. The first was to find the totality of the symptoms of my patient. The second was to find the remedy that approximated most to that totality. That remedy proved to be bryonin, and so it was prescribed. And if the patient in question had had his chest pains upon the left side instead of the right, bryonin would have been prescribed with the same confidence of relief as I would have had with right-sided pain; for it was the remedy more closely indicated than any other.

I will here reaffirm that bryonin has a special affinity for the right side and I will broaden my assertion by the statement that nearly all drugs have an elective affinity for one side of the body over the other. With one it may be one side, with another, the other side. But this statement must not be

read to convey the impression that each drug acts exclusively upon one side, and that side only. How has this knowledge been obtained? By countless provings of each drug upon the healthy, and by thousands and thousands of clinical observations upon the sick by homeopathic and eclectic practitioners. Dr. Murray can find these results in any homeopathic materia medica that he may wish to consult. I cannot take up space here quoting from authorities, for they are too numerous.

Scudder gives marked emphasis to the red spot over the right malar, as being indicative of bryonin (red spot over left malar is equally indicative of rhus toxicodendron) as well as pain in right side of face. From time immemorial the hectic flush upon the malar bones has been accepted as an indication of pulmonary lesion, and the deeper the flush upon one side the more the lung of that side is implicated, and if bryonia is indicated by the red right cheek, why may it not also be indicated by the right pulmonary irritation causing that flushed right cheek?

Why bryonia should have a selective preference for the right side, causing a more flushed cheek, and more fine stitching pains in the right chest than in the left, or why rhus will flush the left cheek in preference to the right, is beyond my knowledge to tell, nor do I believe there is at present any physiological or psychological explanation for that preference. But we do know that such are the facts, from provings and clinical observations, and must accept them as such until they have been disproved by still greater evidence to the contrary.

Neither can I tell why ferrum will cause more severe pinching and drawing pains in the right deltoid and biceps, and less in the left, but it does. Neither do I know why spigelia will cause a severe frontal headache, gradually settling over the left eye, or why sanguinaria produces an occipital headache, which spreads upwards and settles over the right eye, but a knowledge of which have caused many a cure of prosopalgia for me. And so I might go on and cite hundreds of cases where drugs present a preference for one side above the other.

Neither can I tell Dr. Murray why he will get better results from anemonin in a gentle, blue-eyed, tearful blonde than he will get in a brunette. But he will, and he will obtain better results from *macrotys* in a sparkling, black-eyed, tart-tempered brunette than he will get from a pale face and sandy-haired individual.

Neither can I tell why if sulphur was indicated, Dr. Murray would get better results from giving it to the lean and saturnine Fairbanks than to the rotund and jolly Taft. But he would all the same.

"There are more things in heaven and earth,  
Horatio,  
Than are dreamed of in your philosophy."

Perhaps Dr. Murray can tell us why from the small plot of ground, containing the same constituents, half a dozen medicinal plants may be grown, each evolving an alkaloid peculiar to itself and different from all the others. One question is as easily asked as the other and both are equally difficult to answer.

Instead of exclaiming, "this is an absurdity," how much better for himself, his patients and profession, if Dr. Murray had said, "This seems incredible to me, but hereafter I will give bryonin upon these symptoms, and carefully keep note of the results."

Incredulity and inertia have been the bane of the profession for ages. To them was due the first great schism in the ranks, when Hahnemann was compelled to father the school of homeopathy. When he, after more than twenty years devoted to the study of the action of drugs, published his results and begged his colleagues to try his methods, and note the results found, would or did they try them? Not they. They persecuted him from town to town, had laws promulgated forbidding him to practise, and finally drove him from his own country.

That same incredulity and inertia exist today. I warrant you that Dr. Abbott could many a tale unfold of how his propaganda for use of the active principles of drugs, was received by the majority of physicians. That same spirit is filling our land with Christian scientists, mental healers, magnetic healers,

osteopaths, chiropraths and countless others, each containing a modicum of truth, which should have been incorporated and held in the profession. "Man cannot live by bread alone," and neither can he always cure by drugs alone. The old bone-setters that existed in New England forty to sixty years ago, by their methods, broke up many an adhesion and contracted muscle, that were the incubus of surrounding physicians, but they were ignored; but now the osteopaths, reviving the old methods, are filling our towns with men of one idea only, to compete with us in the cure of disease. So will it be until the profession is willing to embrace, not only drugs, but every other method that will be conducive to the welfare of the profession.

JOHN BENSON.

Colfax, Wash.

[We have been interested and somewhat amused by the comments upon Dr. Benson's article. Some have written us, accusing the doctor of being a homeopath, others assert that he is an eclectic—and yet all praise his article, and all find in it real food for thought.

We are glad to be able to inform the critics that they are *all* right; we know, because we wrote Dr. Benson ourselves to find out. He is a graduate of a homeopathic school, who, losing faith in the infinitesimals of that school, turned first to eclecticism and then became interested in and an advocate of the use of the active principles. For a dozen years or more he has been a reader of *THE CLINIC* and an enthusiastic user of the alkaloids.

Dr. Benson still clings to many of the homeopathic and eclectic teachings. We are glad that he does; for we believe that this movement, in which we are all engaged, is big enough, broad enough, promising enough to enlist the energies of us all and that it can benefit by contributions from all sources. In the search for knowledge that may be of benefit to humanity we should be *eager* to "try all things" that we may at the last "hold fast to that which is good."

We called Dr. Benson's article "splendid" and we think it so, as well as everything he

writes, though we cannot agree with much that he says. But in some of these things he may be right, we wrong. Who can say? It is our province to throw open the door for fuller investigation, to encourage it, always searching for the truth. Let us suggest right here that our readers give bryonin a more careful trial in their cases, comparing their results with those claimed by Dr. Benson, and that we may have the reports in these columns.

Just to show you how much Dr. Benson's article has stirred things up we will add that *The Critique*, one of the brightest of our homeopathic exchanges, has made it the basis for an editorial in its March issue, the central idea of which is that the regular school is coming to a *rapprochement* with the homeopathic through the intermediary of—alkalometry! The fact that we found so much to praise in Dr. Benson's article is one of the points made by the editor. We confess that we are unable to see the "homeopathicness" of the alkaloidal idea, but if we are doing anything to bring together the warring sects, we are glad. We believe in and shall work for One Profession, One Medicine. And the fact that we shall admit to our columns next month another article on homeopathy is another evidence of that fact, not that we are homeopaths ourselves. We want to see real *bigness* in our therapeutic faith.—Ed.]

#### KNOWING MORE ABOUT REMEDIES LEADS TO ALKALOIDAL THERAPY

Dr. M. Clayton Thrush of Philadelphia, among the many good things which he had to say in his paper, published in *The Journal of the American Medical Association* of January 25, struck a fundamental truth when he called attention to the undoubted fact that more careful training in practical pharmacy and pharmacology in the medical course would make the doctor realize the importance of having drugs upon which he could depend, would show him the present importance of standardization and ultimately lead him beyond that, to the use of the active principles themselves. On this point he says:

These agents will be chiefly used in their pure form and separated from inert matter, which varies in different specimens of the same drug according to the season collected, methods of drying, age, etc. These active principles combine the advantages of concentration, accurate dosage, portability, purity, permanency, reliability in therapeutic effect and, last but not least, convenience of administration either in the solid or liquid state.

Another great advantage in the use of the active principles in preference to the usual galenical preparation of drugs such as tinctures, fluid extracts, etc., was strikingly presented by the worthy president of this Association, Dr. Bryant, in his address at the opening session, in which he called attention to the excellent work that the New York City Board of Health has been doing during the past year to determine the great variation in the strength of these galenical preparations as prepared by different pharmacists.

They purchased from various pharmacists tinctures, fluid extracts, and extracts of such drugs as aconite, belladonna and opium and analyzed them for the amount of active matter, as, for example, the amount of aconitine in the aconite preparations, the amount of mydriatic alkaloids in the belladonna preparations, and the amount of morphine in the opium preparations, and they found a great variance in strength, some being much more active than the official strength, others much weaker, the majority conforming to the latter class. The analysis of a tablet which was supposed to contain 1-100 grain of nitroglycerin, as designated by the label, showed 1-1600 of a grain.

Is it any wonder that physicians are often puzzled when they do not obtain proper therapeutic results? This same condition that has been found in New York City exists the same everywhere and could be proven if a proper investigation would be made.

This would eliminate polypharmacy, as each drug would be administered for a definite symptom or group of symptoms, and it would not be necessary to order a number of drugs in combination, with the hope that one would prove of at least some value to the disease under treatment, in other words, simplicity in medication."

Nothing truer than this was ever said. How others can fail to grasp these facts, or why so many still hesitate to put them to the test, we can not understand. We congratulate Dr. Thrush on his logical presentation.

#### FROM CENTRAL AMERICA

A thousand thanks for THE CLINIC and its work. I have put into practice your teachings of years past, as for some seven or eight years I have been using active principles. I have also, under the hyoscine, morphine and cactin anesthesia, performed minor operations, single-handed.

One most beautiful case was an operation on a woman, who gave birth to a dead child, with adherent placenta, etc. Without this it would have been almost impossible to do the work. I found her lying on a ground floor in filth and stench; but, as you understand, we get accustomed to unhygienic surroundings and so conform ourselves to existing conditions, and are not much troubled. The worst is when a crowd of dogs comes in to "assist" us! Recently I removed a tumor back of the left ear, with the aid of an injection of only one tablet.

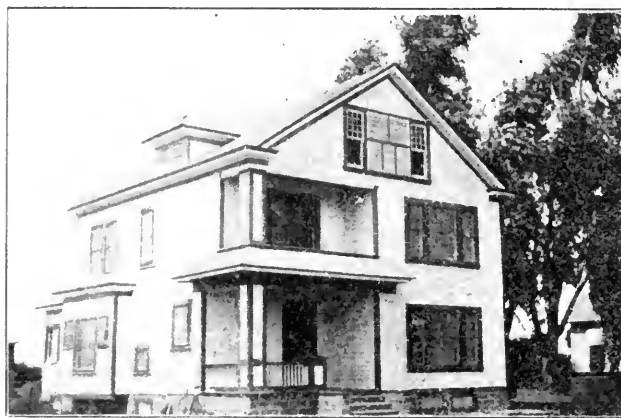
CARLOS F. SECORD.

Guatemala, C. A.

### MORE PICTURES OF DOCTORS' HOMES

On this and other pages will be found some more pictures of doctors' homes. As will be noted at once, they come from different sections of the country, from West Virginia to California.

The picture on this page is that of the residence of our good friend, Dr. W. T.



Home of Dr. W. T. Crawford, Fowler, California

Crawford, of Fowler, California—a beautiful home. We are sorry that the doctor did not tell us something about himself and his family. We shall expect that from him another time.

On the next page is the picture of the home of Dr. George E. Gilpin, of Berkeley Springs, West Virginia. The doctor writes:

"I am sending you under separate cover a picture of my home, also of my favorite horse, Black Prince, a full-blood Patrick Henry from Kentucky, seven years old, coal-black except for a star in his forehead. He has a long tail and mane and is a fine saddler and driver. In the picture also is one of the pointer dogs that follow me night and day.

"I am in my sixty-second year and have practised medicine thirty-eight years this month; am hale and hearty as a youngster, good for many a day yet to ride over the West Virginia mountains.

"Berkeley Springs is one of the oldest watering places in the United States. The town was laid out by General Washington, under Lord Fairfax's grant. General Washington planted three elms on the main street, one of which still stands, in full vigor, on the edge of the Bath square. Both the General and Lord Fairfax built cottages here. The sites are rebuilt now. I enclose a card with analysis of the water of the warm spring."

The analysis shows this water to be very pure and highly carbonated—undoubtedly a most valuable water. But of more interest than the water is the doctor's letter, and his description of himself, his home, and his dog and horse. We must call attention to the poem on another "Prince," which appears elsewhere in this number. It should fit many a doctor's horse—which is certainly getting his "innings" this month—and rightly.

These pictures we believe are enjoyed immensely by our readers. We know they are

by the "cabinet." We hope that many others will contribute. A photograph of your home, your horse, your automobile, your children and family—sober or sad—send them in. Don't forget a picture of yourself, for we want to have a look at your face, and get better acquainted, as much as we can in that way. Then plan a trip to Chicago, for still better acquaintance.

We also give fair notice that we are going to give the doctor's wife her innings before long. Better send her to the photographer and have her "took" at once, so that her



Home of Dr. George E. Gilpin, Berkeley Springs, W. Va.

face can appear in the "gallery" along with those of the rest of our better halves.

### A TRIBUTE TO THE HORSE

Even in the very earliest times of remote antiquity, so far as history, legend or myth can lead us into the dusky and obscure epochs of the primeval existence of the human race, we find that the most noble, beautiful and swift of all terrestrial animals had received the attention of mankind. So true is this that even so long ago as eighteen centuries before the birth of our Savior, Jesus Christ, the horse was known to the inhabitants of Babylon, who spoke of it not as a recently discovered animal, but as one whose period of domestication had even at that early date been lost sight of in the misty vista of long past ages.

It appears that no aboriginal or truly wild horse is positively known to exist, and it seems probable that the wild horse of the East may have descended from horses which had escaped from previous domestication.

The best horses of olden times were those of Media and Persia, and the Medes and

Persians were known throughout the length and breadth of the ancient world for their skill in horsemanship. As time rolled on, and the glamor of the heroic ages gradually waned away, as the bright sunny light of civilization began to shine upon this world of ours with all its brilliant luster, when war, the chase and the like ceased to be the only avocations of mankind, and agriculture and industrial arts began to take their places, then the horse was by degrees used more and more for the purposes of man's domestic life. No longer was the ox the only animal used for such objects.

The horse was now employed to draw the plow through the soil, and was yoked to the peaceful cart

which carried the productions of soil to the market of the primitive town. As a servant of war, however, the horse still remained a prominent feature of the feudal institutions of the Middle Ages, and the orders and devices of chivalry could not have been what they were without the steed of the manly warrior and the noble knight.

To us inhabitants of America and citizens of this nineteenth century the horse is only serviceable on account of its intelligence and bodily strength. However, among the various tribes of Central Asia, the Tartars, the Calmucks, the Mongols, and also the Turks and Huns in times of old, the milk and flesh of horses were the main support of existence. Kumiss, i. e., fermented mares' milk, was considered the best drink among the wild horsemen of the great Shams in the heart of Asia. By such savage tribes of Turanian origin the custom of drinking the milk of mares was introduced among the old Slavonian populations, the Russians, the ancient Prussians, and the old inhabitants of the Baltic provinces of Russia. Here also among the ancient Medes and Persians horses were kept in herds like cows and were regularly

milked. The Goth in Sweden, and the Semibes, a people inhabiting the country of Samland, used to intoxicate themselves with the fermented milk of horses.

Eating horse-flesh was a chief characteristic of the old invaders of Northern Europe. Hordes of yellow and dismal Huns invaded and laid waste the countries on the Danube and the whole of the German Empire at the beginning of the Middle Ages. These people used to put a piece of raw horse-meat under their saddles and ride on it until it was soft enough to be devoured.

In these modern times the horse is so closely associated with man that he appears in almost every phase of society, and it is only when his numerous uses are considered that we realize how greatly is the human family his debtor.

The knight of the days of chivalry would be impossible but for the trusty steed which bore him so gallantly in the lists of the journey and amid the deadlier strife of the battle. Before the plow and at the harrow he has multiplied the productions of the earth a hundredfold beyond what human strength alone could have secured. Laboring before the loaded wagon he has been a steady drudge for man. Harnessed to the elegant equipage or humbler cab, or bearing along the dusty highway the lumbering stage-coach, he has performed a thousand offices indispensable to human comfort and advancement. It is not too much to claim for him that civilization itself would have been shorn of something of its present fair proportions but for the valuable services rendered by this noble animal.

Yet with all his acknowledged value, the horse has been too frequently the victim of neglect and cruelty; often ill-fed, poorly sheltered, and harshly treated, till in many cases the innate nobleness of his nature has been obscured by vicious habits contracted through the mismanagement or abuse to which he has been subjected, and perpetuated by ignorance and prejudices. Naturally, the horse is usually gentle and confiding; he is quick to perceive, and possesses an excellent memory, which makes him capable of being educated easily and to

an extent far greater than is generally supposed. Added to this, he is capable of deep and lasting attachment.

The Arabians, long renowned for their attachment to the horse, early showed the extent to which intelligent training could develop his finer qualities, and render him the most docile and obedient of animals. The Arab understands the value of his horse, appreciates the nobility of his nature, and treats him accordingly. They kiss and caress them, they adorn them with jewels, and with amulets formed out of sentences of the Koran as a preservative against evil and accidents. "In short," says a modern author, "they treat them almost like rational beings which are ready to sacrifice their lives for their master's benefit." In the desert he is the familiar comrade, tentmate and playmate of his master, as docile and intelligent as a dog. The Arab and the Tartar and the Knight loved their horses far more than their families and themselves.

The following story is probably in some measure familiar to the reader, but still it will bear repetition. The whole stock of an Arab of the desert consisted of a mare. The French consul offered to purchase her to send to his sovereign, Louis XIV. The Arab would have rejected the proposal, but he was miserably poor; he had scarcely a rag to cover him, and his wife and children were starving. The sum offered was great, it would provide him and his family with shelter and food for life. At length and reluctantly he yielded. He brought the mare to the dwelling of the consul, dismounted and stood leaning against her. A tear bedimmed his eye as he looked now at the gold and then at his favorite. What he said and to what conclusion he came may be quoted with the following poem:

"My beautiful! my beautiful!  
That standest meekly by,  
With thy proudly arched and glossy neck,  
And wild and fiery eye,  
Who said that I had given thee up?  
Who said I had thee sold?  
'Tis false! 'tis false, my Arab steed,  
I'll fling them back their gold."

As he pronounced these words, he sprang upon her back and scampered off toward the desert.

It is not at all surprising that such a high appreciation of and fondness for this noble animal, united to an intelligent training, has resulted in the production of a race of horses unrivalled in excellence. But among Europeans and Americans the treatment of the horse has been usually so harsh, and the mode of training so deficient in intelligence, as in some respects greatly to lessen his value, even where brutal ignorance has not brought into activity every vice latent in his nature.

We occasionally hear a thought expressed by some professor of mechanics that the automobile is fast replacing the horse and that the latter will soon be a thing of the past. If anyone will take the time to look up the statistics he will find that in the last two years the supply of horses has not been equal to the demand, and there are a far greater number of horses being used today than ever before. A man may own an automobile, and a good one, but still his enthusiasm for the one will not blot out his appreciation of the other; and just so long as mankind can find anything to appreciate in so noble an animal as the horse, just so long will he be the same faithful companion as of yore. And I do not think any automobile, air-ship, or electric contrivances will lower or depreciate the value of the noble qualities of our equine friend.

A friend and I took a thousand mile trip in an automobile last August, as a result of which I am still confined to my room, an invalid. Many, many times I longed to have in my hands the ribbons over the backs of my trotters instead of holding the guide-wheel of the touring car, and I fancy a goodly number of our professional brethren will say, "Ditto."

H. J. THOLE.

Brookville, Ind.

[With automobiles so cheap that even a medical editor can own one, free gasoline at every crossroads, and free repair-shops as plentiful as Carnegie libraries, there still will be no lack of friends for the horse among the medical profession. The Doctor's Horse! God bless the noble animal! He has suffered much at our hands. The

tribute to "Old Prince," that follows, is there fore well-deserved.—ED.]

# OLD PRINCE

Come, rouse thee, gentlest of the tuneful nine,  
Still may the muses all with thee combine  
To mount me on Pegasus, good and strong,  
With friendly harp, well panoplied with song.  
Be pity-stirred, oh friends; though theme so low  
It merit hath, indeed, supreme, I trow.

May he, forsooth, who speaketh the rude task,  
Or they, for whom his strength and life are  
given

Behold today his coat—ah, sorry mask!

Put on by toils untold, o'er highway driven.

How often left fast-bound to cheerless post

With dripping skin and painful panting chest

The master gone within, at grave behest,

To care and caution deaf or wholly lost.

And diagnosis pressed by stricken sex

The doctor pityingly—" 'Tis hysterics."

Again himself and horse drags o'er the way

In sombre mood, which drooping heads betray.

And then, again, scarce home till other call:

"Post haste, some awful mishap doth befall—

Spare not, spare not thy rickety old horse."

(The patient still perhaps more scared than  
hurt.)

May speaker ne'er feel pangs from fell remorse

More cruel than doth Prince from master's  
quirt.

Still "gad" inspired forth quickly do they move.

One thinks of fee; one thinking most of feed;

One mounts to fame, one doth to boneyard  
speed,

Which many tales of doctors' horses prove.

At last off duty, homeward lagged again,

Almost on ragged-edged despair—lo, when

He's met by customer and long-tried friend,

Honest and true and just as fate could send

With heart hypertrophied and purse of gold

To meet demand, and sympathy untold.

And "Thanks, my friend, for all you've done for  
me,"

The doctor cheers, and ten good ears of corn

His faithful steed makes likewise strong and cheery,

And wend they home less thoughtful and for-  
lorn.

"Go, Prince! the way's now dark and chill and  
rugged

And I'm the worse for want of rest and sleep;

Go 'long! I'll wrap me close while you may  
keep

The tortuous way. We'll sup and then to bed."

Yet promises like doctors' naps are broken

As pie-crusts—nor with pleasant thoughts be-  
spoken.

At thee, alas! I'll never fret or chafe,

Thou keep'st thy temper and thy master safe.

And good for evil treatment doth return;

While man thus scourged, for fierce revenge would  
burn.

O glorious Prince! my most intrinsic friend,

Though praise or blame's, to thee, less con-  
sequence

Than oats and hay—thy will doth daily bend  
 Unto my need—with kindly diligence  
 To many a scene of blood and terror borne,  
 Companioned by my tedious thoughts and  
 thee  
 Will make thee live within sad-pictured mem-  
 ory  
 Whatever fate—or happy state, or lorn.

O Prince! for long my staff and comfort all,  
 The day doth come apace when thou must fall,  
 For great and small alike must yield the ghost  
 Or grewsome lot or happy be their boast;  
 Hence tenderness and freedom I vouchsafe  
 For merit past—no toil e'er more shall chafe  
 Thy aged limbs. In sweet desuetude  
 Thy remnant days shall bask in full repose.  
 And when the darkness o'er thy form shall brood  
 Fair Mother Earth thy carcass shall enclose  
 On resurrection morn, Thou Princely One,  
 Accoutered with my pills for Paradise,  
 Whatever fate or hope there may give rise,  
 Eternal round together we shall run.

A. TAYLOR.

Vienna, Mo.

### THE DOCTOR'S HORSE

The doctor's horse, the noble steed,  
 Who carries the doctor in time of need,  
 The tried and faithful, always true,  
 How seldom he gets the credit due.

In summer's heat and winter's storm,  
 To houses of suffering all forlorn,  
 He carries the doctor on his mission,  
 As if he were blessed with intuition.

He, too, is routed from *his* warm bed,  
 And goes long hours without being fed,  
 While standing on guard all alone,  
 Waiting for the stork to visit the home.

How faithful to the master is his heart;  
 How loath from him an hour to part;  
 How gladly he welcomes him with a neigh,  
 When ready to start on his homeward way.

Companion to his master in his solitude,  
 Responsive to the doctor's every mood,  
 He carries him cheerfully on his way,  
 Through darkest night and brightest day.

Since the doctor uses the alkaloids,  
 Many hard trips his horse avoids.  
 For 'tis a fact that's now conceded,  
 No extra trips for drugs are needed.

Faithful and true they work together,  
 And nothing can their love dis sever.  
 May the doctor's horse be always blest,  
 In a future state of heavenly rest.

[Dr. Gilliam's poem is another response to our request for something in verse about the doctor's horse. That faithful animal certainly has had its innings this month—

enough perhaps to last awhile. He and his rival, the automobile, seem to be vying for space in this issue.—ED.]

### THE IMPORTANCE OF "DOSE ENOUGH"

I first subscribed for THE CLINIC about five years ago, at which time I received the little twelve-vial case. Since that time I have been receiving a constant "postgraduate course." I have been absorbing a great deal of practical knowledge and prospering through the use of the same. I am no writer and do not have any "great cases" to trouble your readers with even were I able to set them before the "family." I have frequently, however, had very striking demonstrations of the remarkable promptness with which diseased conditions yield to the "little bullets" when administered according to the CLINIC teaching, and I often felt as though I ought to assist some in throwing "hot shot" at the enemies of our "up-to-date" methods.

Will they say that the following facts were something that just happened that way? I suppose they will, but the dispensers of active principles know better. This case demonstrated your theory so forcefully and nicely that I am persuaded to send it to you, and if it is of no value for "shooting" purposes just put it into the little basket at the end of your desk. It will at least help to make steam for turning out the next edition of "Our CLINIC" when it goes into the boilers.

On December 10, 1907, I was called to see Mrs. B., aged thirty-five, a good healthy German woman and mother of three children. I arrived at the house about 9:30 a. m. and found her with flushed face, especially the left cheek; full, bounding pulse of 150 beats; short, quick breath, ending each exhalation with the characteristic grunt and about 40 to the minute; temperature 103.2°F.; much pain in lower left lobe of the lung. She had been taken with a chill suddenly at 4 a. m. I realized that there was here an opportunity of making a "show," and turning around to the little ten-year-old girl, I asked who was going to care for



the mother. The mother chipped in with, "I don't need anybody; just leave your medicine and the clock beside me and I will take it myself." This piece of information knocked a hole in my contemplated "show". I realized that the defervescent compound could not be pushed to full effect without somebody there to look after the pulse. I usually give one granule every fifteen minutes until the pulse drops down to between 80 and 90, if there is anyone at hand who can be trusted to count it. As it was, I left orders for the regulation cotton jacket, calomel, gr. 1-10, every half hour for ten doses, to be followed by saline laxative, q. s., to give free movements two hours after the last dose had been taken. The three sulphocarbolates, one every two hours, and specific instructions to give the "red solution" one teaspoonful every half hour until I called in the evening. This "red solution" was thirty teaspoonfuls of water with thirty of the defervescent granules and colored with carmine.

I called again in the evening about nine o'clock and found the patient but little better. Headache severe, pulse 130, temperature 103°F., respiration fast and painful. She had had no stool and the solution had not diminished as fast as I thought it should have done although the patient said that she had not missed a dose. I left with instructions to give more saline laxative and kept up the dosage of the solution just as it had been except that for two hours it should be fifteen minutes apart instead of thirty (as I thought that it would be safe) and to give the sulphocarbolates until I told them to stop.

I visited this patient twice a day and kept up the above treatment until the fourth day, with practically no signs of improvement although she had two stools each twenty-four hours. The fourth day I was called early in the morning, the messenger stating that Mrs. B. was worse and that blood was coming from her mouth and nose and that I must hurry over. I started over, mentally cursing people who, like this family, could have a nurse and would rather face death than part with the price of one, for I felt

that if I could have pushed the granules the first twenty-four hours of her illness she would now be on her way to recovery instead of growing worse. I arrived at the house and found half of the neighborhood present, all of whom I imagined looked at me with scornful eyes. The husband also was there as he thought (so he said) that his wife was dying. I entered the sickroom and was greeted by the patient with the very encouraging information that she was getting ready for the graveyard. She was a picture, with her flushed face, dilating nostrils, short, jerky respiration and anxious expression. Her pulse I found to be 160, temperature 104.5°F., intense pain in upper lobe, and she was coughing up plenty of bright-red blood. If this was not an extension of the process, will some of our wise friends tell us what it was.

I called in her husband and told him that if he wished to keep his family together he would be obliged to remain by the bedside and follow instructions. I taught him to take the pulse, told him to give a teaspoonful of that red solution every ten minutes just as regularly as the ten came around until her pulse dropped below 100 and then send for me. I told him also that if he did this we need have no fear from the extension and could probably save her life. I left after seeing that ventilation had been provided for again (which I generally have to do every time I call). About 3 o'clock in the afternoon word came that the pulse was down to 105. I wrote a note directing them to give the red solution every fifteen minutes until I called, or until the pulse was down to 80 or 90, and then every half hour thereafter.

I went over in the evening and found my lady smiling (not much, to be sure, but a little), resting comfortably, moist skin, no pain, respiration easy but a little fast, pulse 90, temperature 101.2°F. She made rapid recovery from that time on, every hour showing some improvement. I feel that I must ask the "dope dopers." Did this just happen this way or do they always cut short lobar pneumonia as easily? I think not; anyway, I never could by giving tincture of aconite,

3 minims four times daily, neither did I cut it short by following Osler's advice.

WM. COLLIER.

South Chicago, Ill.

[As you say, the pushing of the right remedies to effect the first twenty-four hours means everything, but in this case we should have insisted upon someone being present for at least that day. You are to be congratulated, however, upon the successful termination of the case. We doubt very much whether such satisfactory results could have been secured under any other method of treatment.—ED.]

#### A CASE OF BRONCHO-PNEUMONA

I may state that I use the alkaloids in my practice as much as possible, and can not express myself when I say that I am more than pleased with this form of medication. Since commencing their use the practice of medicine has become a pleasure to me, and a satisfaction. I am comparatively young in harness but nevertheless I get my results as well as the older ones. When I was graduated I was one of those "Oslerized" doctors, that is, I did not believe in therapeutics, except in a limited degree, but being a country doctor, I had to use medicines for appearances' sake at least. I used some of the active principles from the start, and I soon began to get my eyes open as I was getting results that I did not think possible; so I soon began to use the alkaloids altogether and now I am a through and through alkaloidal man and am proud of it. Not only do I get results, but I know when I am going to get them.

I am not writing this with the intention of expressing any new thought, but simply to let my friends who take this journal know that I am using active-principle therapy with success. I want to ask them (if they do not already) to give the alkaloidal system of medicine a trial. That's sufficient.

Now I want to report a case of broncho-pneumonia in a 19-month old child and how easily I cured it. I was called about 10 o'clock at night to come to H. P. at

once as it was thought that his child was dying. On arriving I found a very sick patient. History of the case was: A bad cold of five or six days' duration and which became suddenly worse in the last twelve hours. The child had been having convulsions and was in a semicomatose condition when I examined it. I took the temperature, which was 105.2° F.; pulse, 180; respirations, 70, very labored. Skin, hot, dry, and had a glazed appearance and was of a pearlish blue tint with finger-nails slightly cyanosed. On auscultating the chest mucous rales were everywhere in evidence. Bowels had not moved within the last twenty-four hours, and the child had not been able to keep anything on its stomach in that length of time.

This was my method of attack: Defervescent compound No. 1, eight granules in twenty-four teaspoonfuls of water, one teaspoonful every ten minutes for five doses and then a teaspoonful every half hour until effect. After giving nine doses of the above, temperature came down to 102° F., pulse 120, and respirations much more regular and easy. In the meantime I had given an enema of soapsuds (with good results), and applied mustard plaster to the chest; after the desired effect the chest was greased and an oiled-silk jacket lined with ordinary cotton batten was put on. I also made a steam tent (by tying an umbrella to the back of a chair and putting two sheets over it) and placed him in it, as the cough was dry and irritating.

I stayed all night with the child, and on leaving in the morning the temperature was down to 101° F., pulse 120, respirations 60. Convulsions had ceased and the child began to notice things and especially take notice of me, as she had no love for doctors. I left the following medicine: Aconitine, digitalin, veratrine and apomorphine, in appropriate doses; also calomel, to be followed by castor oil. Liquid diet. The child remained about the same for two or three days and then steadily got better and was discharged on the sixth day.

Next day the father of the child came to the office, paid his bill and thanked me

for my services, saying that from that time on I should be his family doctor.

Now, when one can do these things and see the changes for the better with his own eyes (while he waits), then the practice of medicine becomes a pleasure. You can't blame one for being optimistic, can you?

W. E. BALDWIN.

Jamaica, Ill.

#### ON "CLEANING UP" ONE WAY

I have for some time been a firm believer in the "clean-up" treatment and am glad to note that you lay special stress upon this point. There is one method of attaining this end which, in my hands, has been of first importance, and which, even if you are already advocating it, will bear repetition. I refer to the use of enemas. Not as ordinarily understood, one, or at most two, quarts of water with glycerin, soap, oil of turpentine or other irritant, injected at high pressure, but the use of the least-irritating solution possible, at low pressure, and in quantity not less than three quarts, the object being not so much to secure a substitute for cathartics in exciting bowel-activity, but rather to obtain the cleansing action of water as in its use elsewhere. This treatment is of course especially indicated in cases of chronic constipation. A brief consideration of the conditions to be met will enable us to appreciate better the benefits derived.

The large intestine, or colon, is encircled at varying intervals by constricting bands which divide the gut into segments. In all cases of chronic constipation, and to a certain extent in every case, in the pockets, or sulci, thus formed will be found collections of fecal masses, many of which have been there for weeks, months, or even years. Indeed, on their removal they often have the appearance of being "moss-grown." In severe or long-standing cases these masses form a regular lining to the intestine, leaving merely a passageway through the center.

As the chief function of the mucous membrane of the colon is that of absorption, it is easy to see how every case of constipation

must inevitably be one of autointoxication. Indeed the character of the "nutriment" (?) furnished the system in such cases is not especially pleasing either in fact or fancy, nor is it conducive to health. So closely adherent are these masses to the intestinal wall that their dislodgment by catharsis alone is difficult if not impossible. For this fecal coating largely prevents any action of the medicine on the mucosa of the colon, thus accounting, in part at least, for the tolerance of the bowel in these cases to massive doses. In fact it is usually found that after the cleaning out of the bowel by injections the patient needs far less medicine and sometimes none at all.

The patient is instructed to use at each treatment at least three quarts, and as much more as possible, of normal salt solution, maintained at a temperature slightly above body-heat. The treatment is to be taken while lying on the right side, with the hips elevated, with the bag of the syringe suspended about two feet above the hips. With this low pressure no injury can be done to the bowel, while the object is to use sufficient water to produce slight distension, thus loosening up the fecal masses. These treatments are to be continued daily as long as indicated. Usually four or five thorough treatments are sufficient.

I am only beginning to employ alkaloidal medication, so do not feel that I have anything of value to offer along that line. One thing I like is that you aim at securing results, regardless, or in spite, of theories.

G. C. EMERY.

Preston, Ida.

#### ULCER OF THE LEG TREATED WITH THE RUBBER BANDAGE

About thirty years ago I received Dr. Henry A. Martin's pamphlet on the treatment of old ulcers of the leg with a rubber bandage. There was an old farmer up in that country who had a sore leg of long standing but he would not let me treat it. I came here in 1884, and found a good many sore legs. There was an old farmer, a very good-hearted man, whose daughter had

recovered from dysentery, under my treatment. This made a friend of her father.

I did not know for a year or two that my friend had a sore leg. Why should he tell me? He had tried many physicians and many things without benefit and he did not think that I could do him any good. I was frequently at his house and often found him lying down and this led him to tell me that he had a sore leg of about thirty years' standing, and that his leg gave him pain and on this account he had to lie down a good deal. He was greatly surprised when I told him that I could cure him. His friends told him that if I healed that sore it would "break out in his brain and kill him;" but he consented for me to treat him.

I sent for a bandage and put it on his leg. It relieved the pain so that he did not lie down that day. He went about his business all the time and in a few months was well. He had a brother-in-law who had a sore leg of thirty or thirty-five years' standing. I cured him and a good many other cases. I used to think I could cure them all, but in my comparatively limited experience I found two cases that could not tolerate the bandage.

Sores heal poorly on a patient who is anemic, cachectic, malarial with an enlarged spleen, etc. It took a long time for me to effect a cure in such a case. Another such could not get the money to get his bandage. He went to the coast and staid a few months, came back in good health and his legs were well. I find that old people who have had sore legs for many years, have to wear the bandage always or the new integument gets dry, cracks and the sore breaks out again and they have to resume the bandage; but young and middle-aged people remain well.

Manner of applying the bandage: It is easy to apply the rubber bandage. First learn how to apply it then teach your patient. Apply it around the ankle, under the arch, over the instep, up the leg, making reverse turns, finishing and tying the tapes below the knee. The bandage is worn during the day and taken off, washed and dried during the night and applied again next morning, before the patient gets out of bed.

It is applied just tight enough to keep it from slipping down and when the patient gets on his feet the tissues fill and it is of the proper tightness. If any grease or salve is used on the leg at night it must be washed off with soap before applying the bandage, as grease spoils the rubber.

One of my patients had to wear the bandage at night; if he did not, the sores were painful, the muscles would act spasmodically and the patient could not sleep. In such cases the bandage must be taken off, washed and reapplied, or better, have an extra bandage for the night.

Dr. Henry A. Martin, of Boston, introduced the rubber bandage in the treatment of ulcers of the leg, used it twenty-five years, showed it to the physicians about him, treated six or seven hundred cases, and cured them all. He went to the meeting of the American Medical Association in Chicago, in 1877, and laid the treatment before that body. It was published in their proceedings and he also published it in pamphlet form and sent it all over the world, yet its use seems likely to become a lost art; it is not mentioned in some of our best recent works and some of the best and most progressive surgeons don't know anything about it. Were I to stop here, I should be flooded with more letters than I could answer, as was the case last January when I wrote a short note about it in *The Medical World*.

Send ten cents to Dr. Francis C. Martin, of Boston, and ask him to send you his father's pamphlet on this subject. If you want a bandage send him \$1.75. Dr. Martin had to go to manufacturing bandages or superintending it because he could not find suitable ones on the market.

The bandages cure principally by affording a protection to the sore and by even pressure.

THOS. H. HAMMOND.

Oxford, Fla.

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#### APPRECIATIVE AND OPTIMISTIC

Accompanying this you will find my renewal for CLINICAL MEDICINE, the best therapeutic magazine published. Your post-

graduate course starts out like a winner, my years of experience in the drug business giving me ample opportunity for observing how necessary is the opening chapter—particularly that part relating to incompatibilities—to many practising physicians today.

That January issue is full of meat—good, rich, red, juicy beefsteak, cut one inch thick and broiled to a turn. I have read every word in the magazine proper, but one paragraph brought me up with a “round turn,” made me “sit up and take notice,” and made me wish I could talk to Dr. S. D. Wetherby for just about fifteen minutes. As I can’t do that, I unload my burden upon this paper.

I refer to page 93, January number, second paragraph, second column, beginning “I am tired and disgusted.” Whew! how it hurt. I was elected mayor of this village last November, never asked for nomination, never asked a single individual to vote for me, never neglected business nor study for one moment to attend to the campaign. I have worked my “team” on the highway, hauling corn I had bought, because I didn’t have anything else to do, and I must economize at every corner and then can hardly make ends meet. My only regret was that I didn’t have land on which to raise that corn myself.

I aim to study a certain amount each day—my wife says “night”—read my magazines religiously, strive conscientiously to keep myself abreast of the times in medical knowledge, and my only regret is that I cannot afford to buy books that I really need.

My income from practice is such that I am compelled to exercise the strictest economy. I do not doubt there are others in the same boat as myself, compelled to do things they would much rather hire done, but I live in a rural community where the inhabitants are distressingly healthy. I have been here three years and in that time had one case of membranous, or diphtheritic, croup—very severe case. Saved it with antitoxin, calx iodata, strychnine arsenate and local measures. I had one case of measles, and four of diphtheria. Lost one—didn’t see the patient until the fifth day of attack. No physician was called before that time. I am on friendly

terms with my colleagues, nearest one eight miles away. Have been very fortunate with cases, thanks in great measure to the teaching of CLINICAL MEDICINE. Am disgusted with the number of clean-up cases after abortions, in which I have been wonderfully fortunate, and I think every M. D. (Disgrace to Medicine) responsible for the occurrence of the same ought to be confined in a penitentiary. I am ready to quit right now and use the knowledge acquired by twenty-two years’ work behind the prescription case and in the practice of medicine somewhere else, where mental anxiety is less and remuneration more sure.

Before closing I want to voice my appreciation of Shaller’s “Guide.” If you haven’t got it, Mr. Doctor, get one at once. You’ll never regret it.

JOHN F. HENDERSON.

Rochester, Ohio.

## INDEPENDENCE AND PROGRESS

Long before this we intended to publish a portion of the splendid “Oration on Medicine” delivered by Dr. George F. Butler at the meeting of the Mississippi Valley Medical Association at Columbus, last fall. We reprint from *The Interstate Medical Journal*, which published the entire address.

Intellectual truth, however, cannot be syndicated or monopolized. The practice of medicine can not be improved by a trust. “Hand-me-down” methods, theories, or dictatorial advice cannot aid the intelligent, independent practitioner. Kindly suggestions and the plain, unprejudiced statements of the results of personal, clinical experience are valuable and are welcomed by all liberal and progressive physicians. But the *ipse dixit* “this is so” of the doctrinaire, the pharmacist, the pharmacologist, or the medical editor can but engender discord and retard true medical progress. The time has passed when a few men can successfully set themselves up as authorities, or dictators, or arrogate to themselves any special theory or procedure. Candid practitioners today recognize good in all systems based upon scientific thought and pursued with intelligence and sincerity. By means of release from the shibboleths of the past, and adherence to a given “authority” or “school” the freedom of present practice is greatly enhanced, to the immense benefit of the patient and the lasting honor of the physician.

In science there is no burden of proof; neither can medical education and training fulfil its highest mission under the “factory system.” Let me say that it is doubtful if every successful practitioner

in the history of our profession has not at times resorted to the primitive methods of the voodoo and the witch. One would be shocked, at first impression, to be told that he had employed such methods; but in the last analysis, what is mental suggestion or the administration of placebos; and who has not employed them? Remembering the function of our profession to be the prevention and cure of disease, and the relief of suffering; and remembering that no two cases of disease in the whole history of the medical profession presented identical conditions, it is monstrous for any man or set of men to forbid the use of any method, any instrument or remedy, or any treatment which in the opinion of the attending physician promises success.

I repeat, it is an insult to our independence and intelligence that we are not allowed to read any book or medical journal we please, at any time or place, whether in a medical society or in the seclusion of our offices, to use any remedy we please, whether it be so-called "regular," "homeopathic," "eclectic," "alkaloidal" or "proprietary," or any method of treatment whatsoever, even though it smack of Christian science or osteopathy, without being subjected to public ridicule and criticism by a few self-appointed "authorities" and "leaders" in medicine.

In the medical profession, as in religion or science, *the perils of dominating influence* cannot be escaped. While the evils flowing from industrial concentration can be met, the evils that must follow the syndication of intelligence cannot be avoided. As stated before, the struggle of the ages has been the emancipation of truth from authority.

No thoughtful physician can fail to see the immense advantage of a liberal mind in the pursuit of his calling. It is of signal importance that the doctor should not only welcome every advancement in medicine, but he should at all times be willing to put the broadest construction upon opinions conflicting with his own.

Every physician having the interest of his profession and of humanity at heart should admit candidly the value of any method, theory, or practice which may promote the common object of alleviating human misery, taking the generous view of things, without which the pursuit of learning is but a jaundiced, melancholy affair.

Fortunate it is for him who has learned the charity and liberality which characterize all genuinely great or progressive men in every profession. His open heart and intellect are spared many a regret, and throughout his career for him the sun of truth is shining everywhere.

If we find our pathways obscured by shadows it is because we are walking away from the light and not toward it. The sacred flame that glows upon the altar of truth illuminates and cheers only as we approach it.

If we wish to progress and influence humankind in the right direction, each of us should be modest in the presence of nature, fearless in the face of authority, unwearying in the pursuit of and absolutely free to seek the truth in our own way.

"Freedom's secret wilt thou know?

Counsel not with flesh and blood;

Loiter not for cloak or food;

Right thou feelest, rush to do."

[The above is a most happy putting of a most important point. The medical profession should cling to its independence above all things.—ED.]

## GENERAL THOUGHTS ON MEDICINE

When one takes a view backward through the years, the retrospect is interesting for its variety of setting and situation. Sometimes the picture is bright and luminous on a fair field; sometimes, alas! it has a dark background and partakes of the lurid depths of tragedy.

How varied are our experiences as physicians! Even as "country doctors," if you please. Take the most ordinary, the most commonplace existence, and nine times out of ten, yea oftener, there is something in it ever and anon of strange and startling interest. Too often things would seem to set at naught all the staid and fixed rules and principles on certain lines. I am reminded in this connection of an experience of a professional friend of mine, which would seem to negate all teaching of the glorious Lister's doctrine of asepsis and antisepsis—that splendid idea that has done so much for the human family, and made modern surgery a thing little less than marvelous.

But to the tale. My friend's first "ministration?" began in the wild woods of Florida, in a community where the arts and graces of civilization had but a weak hold indeed, and being a country boy of limited means, his armamentarium (especially surgical) was very limited indeed. His "jurisdiction" extended to a radius of some ten to twenty miles from his location in that wild country. Being young, ambitious and energetic, he was open to any service that offered, as all of us on our first legs usually are ('tis a pity too often that we can't remain so).

One day he got a call to go some twelve miles into the wilderness to attend a case of labor. He told me, in relating the experience, that he thought it rather unusual to go that distance for that kind of service, as the "old grannies" had for time out of mind been supplying those wants in that wild section. Still no hint of any special

difficulty in the matter was given him by the blunt and ignorant messenger that came for him.

The long ride brought him to his objective point at about 8 o'clock at night, where he found the situation to be a case of retarded and difficult labor, the patient then having been some twenty-four hours in "active" work without results. After hastily regaling himself of the humble fare, and after looking after his faithful horse himself (a point too often neglected) he addressed himself to his case. To his horror examination revealed a condition of pelvic deformity utterly beyond the possibility of natural birth. There he was, twelve miles from any help or enlightened resources. Night had come on, it was bitterly cold, his patient in an agony of suffering. He said that he had two ounces of chloroform in his "bags", some morphine tablets and a hypodermic syringe. This constituted about all of his means to meet the enemy, death, save indeed a vial of the stereotyped ergot carried on such occasions.

But now, listen. Here comes the resourceful mind—the true doctor, if you please. The people were extremely ignorant and would follow his lead without question or hindrance, a thing that too often wiser ones would profit by. He ordered a pot of water put on over the hooks and brought to a boil. Out in the yard was an old grindstone, such as they sharpened the farm tools on. He asked for the kitchen knife and brought it himself to a razor's edge on this thing. He went back in the natal chamber, and after scrubbing himself and patient with "turpentine" soap, addressed himself to his gruesome task. He had given the poor creature a hypodermic of morphine. Now with the help of two old grannies who gave the chloroform and assisted otherwise, he did a laparotomy and got a living child for his pains, and a recovered mother.

His suturing was done with cotton thread (waxed) and a common needle, such as our ladies used to darn with. Three days after, he went out there, found his patient propped up in bed laughing and suckling her young.

These are authentic facts. The operator was Dr. John Allred, of Pike County, Alabama, formerly. I think he has written up the case, but I know the members of the CLINIC "family" have never seen it. Now, Mr. Editor, what do you think of that. Truly the pioneers are the ones that "blaze the way," pointing out the path for lesser lights to follow. Witness McDowell doing the first laparotomy in the mountains of Tennessee, under the shot-gun pressure, his neighbors swearing that if he killed his patient his life should answer for it. The doctor went down on his knees. He prayed for the light that never fails. It came—he arose, did his work with steady nerve and true eye. The guns were reversed, and Alexander McDowell went forth a hero in the eyes of those who had sworn to kill him. Look at J. Marion Sims' long fight for recognition. Finally he got it. The humble country doctor that practised in the "black belt" of Alabama flashed forth in Titanic genius, and the lay world as well as the professional is doing him homage. Truly the inspirations of genius can't be "downed." The God that is Man will show itself and with insistent power.

How well did I appreciate Dr. Gould's plea in your excellent journal for the country doctors. They are not dead, my brother. Specialism has done its best to kill them but their banner floats above the wave—pure, brilliant, high-crested. And the years have not yet come when this proud ensign will dip in humble supppliance to the pure laboratory work.

F. R. CULLENS.

Ozark, Ala.

[The American country doctor is the most resourceful man in the world. He deserves every word of the beautiful tribute which Dr. Cullens gives him. He may lack the polish which city life imparts, but polish, after all, is only superficial; the real "timber" lies beneath. We don't care a snap whether you come from city or country, Brother Doctor. It's what you can do, what you think that counts with us. Give us the man with ideas of his own and nerve

enough to use them. Here's your forum. Tell the "family."—ED.]

### SOME MEDICAL CURIOSITIES

Hysteria is and has been an interesting problem ever since the earliest days of medical research. It has been seen in the excited religious gatherings of all countries. Moebius gave it this definition: "A state in which ideas control the body and produce morbid changes in its functions." It produces some of the most interesting cases known to the medical profession. Kleptomania, pyromania, nymphomania and all kinds of perversities are of hysterical origin.

I have seen a man who was able to sleep standing and even walking. He preferred to sleep standing in the middle of an open field and cared nothing for rain or snow. So sleepy was he that once, when under arrest charged with being asleep in a field during a snow storm, he fell asleep in a dock.

A distinct physical curiosity was a young man whose case has been made public by the late Prof. von Bergmann of Berlin, Germany. This individual had his muscles so completely under control that he could move each of them as he wished without putting any other part of his body in motion. Owing to this play of his muscles he was able to bend his body into all manner of forms, and in one instance he managed to draw his intestines into the upper portion of his abdomen, leaving a complete cavity in his lower abdomen. At another time he pressed them downward, making his abdomen resemble a sphere. His power over himself was so great that he could make his pulse stop beating and he was able to move his heart from side to side.

Another human mystery was a man of Italian descent who ate glass, iron, wood and one hundred links of sausage for dinner and finished with a two-gallon drink of whisky. King Humbert appointed him museum porter in Modena, Italy. Another young man, also Italian, has two hearts. The organ on the right side discharges all the cardiac functions, the other, which is on the left side, is quite insensible and immobile. He has also

two more ribs than a normally constituted individual.

Another form of mystery is acromegalia. In 1886 Professor Marie called attention to two cases presenting acquired symmetrical enlargement of the hands, feet and face and proposed the name acromegalia, which has now become current. Before complete ossification takes place the enlargement is not only in lateral dimensions, but also in length, and the limbs become disproportionate to the body, producing gigantism. Professor Marie mentions a man nine feet high, the diameter of whose head was about eight centimeters, but with a very small heart in proportion to the lungs, which were one foot long.

There are several cases mentioned in medical books of 40-, 50- and 60-year old "babies", and they keep in the Vienna Museum (Austria) the remains of two children, one of whom died at the age of 46 years.

Very interesting cases are those of simple melancholia. Patients often say they are not sick, but that they have committed sins not only against God but against society, and so they must undergo the punishment ordered by Heaven and also answer to man for infringement of human law. They insist that they are to be put in prison, to be killed, to be hung.

Katatonic symptoms have been noted in other forms of psychoses, but the disorder described by Dr. Kahlbaum under the name of katatonia is really a form of melancholia, but especially with those of precordial distress and agitation.

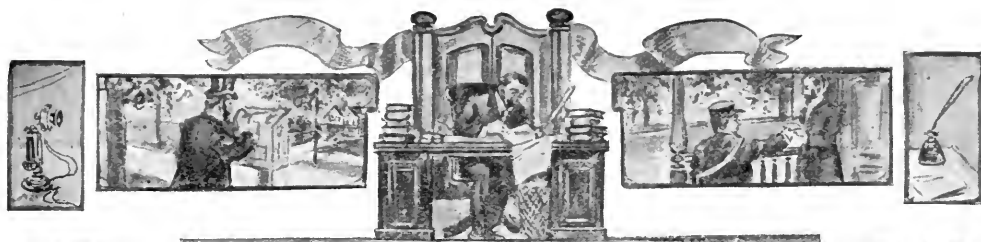
A most noted medical curiosity was that of the Siamese twins, two brothers who were joined by the spinal cord. Both of them were married; one had five, the other six children. They died almost simultaneously at the age of 50 years.

S. R. KLEIN.

Chicago, Ill.

[These cases are interesting. The world of medicine gives many curiosities, some of which have doubtless come to our readers' attention. Why not report?—ED.]





## CLINICAL · MEDICINE POST-GRADUATE · SCHOOL *of* THERAPEUTICS

George F. Butler, M. D., Director  
Thomas J. Mays, M. D.  
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.  
William F. Waugh, A. M., M. D.  
Alfred S. Burdick, A. B., M. D.

### PART I.—LESSON FOUR

#### THE ACTION OF REMEDIES

##### Variation in Dose Requirements.—

The doses of drugs as named in many textbooks differ materially from those prescribed in actual practice, as they are intended to express only the *average* quantities to be administered, the exact amount varying with the conditions of any particular case. These conditions may be classed under the heads of age, sex, temperament, idiosyncrasy, habit, state of the system, temperature of the body, time of administration, intervals between doses, accumulative action of the drug, and the contingent considerations of diet, climate, race, pathological condition, etc.; oftentimes a complicated problem to even the most skilful therapist.

Children and young individuals are usually more sensitive to drugs than adults. Children are especially susceptible to morphine or any preparation of opium, to nicotine, and to strychnine. On the other hand, they are very tolerant of bromides and of calomel.

Old people are also less resistant to drugs. Purgatives and emetics are especially debilitating to old people. Old people, or those suffering from atheroma, should not be given drugs which increase the blood-pressure much, or at least if such drugs are given they should be given with caution, and the patient watched carefully.

**Dosage for Children.**—There are several rules for estimating the doses for children, the most popular one, perhaps, being known as *Young's Rule*. This rule is, to multiply the adult dose by the age of the child, and divide by the age plus 12. *Clark's Rule* is, to multiply the adult dose by the weight of the child, and divide by 150, the weight of the average adult. *This rule in the alkaloidal treatment gives the most exact results*, and is far superior to Young's or the following, namely, *Cowling's Rule*, which is, to multiply the adult dose by the age of the child at its next birthday, and divide by 24.

In estimating the dose for aged people, it is generally taken at somewhat less than that for adults. After 60 years the adult dose is reduced to 4-5 or 2-3, and in extreme old age to 1-2 of that ordinarily given in the textbooks.

**The Effect of Weight.**—Other things being equal, the effect of a given dose is universally proportional to the weight of the individual, exclusive of the adipose tissue.

**Influence of Sex.**—Women usually require much smaller doses than men, because of their smaller size and weight, although it may be due partly to the fact that their tissues react more strongly to drugs,

which, however, has not yet been satisfactorily established.

**Pregnancy** modifies the action of drugs, and contraindicates the use of frequent cathartics, because of the danger of producing abortion; so also aperient diuretics are contraindicated because of their tendency to induce albuminuria, etc.

**Menstruation.**—Physicians should also be careful about the administration of certain drugs to women during menstruation. Many women during this period have a tendency to react in a different way toward medicine. Between the menstrual periods the question will very commonly be put to you by your female patients: "Am I to continue with the medicine during the period or not?"

In the case of some mild-acting drugs, of whose action you are very sure, there may be no harm in continuing them during the period of menstruation, but in cases of drugs the action of which is positive, it may be most advisable to discontinue their administration. For example, in some cases antipyrin has been given in ordinary doses during menstruation, with the effect of producing great collapse and cyanosis, although the same drug had been given in the same doses, to the same person, in the intervals between menstruation, without producing any untoward effects.

**The Temperament.**—It is well known that phlegmatic, dark-skinned individuals respond to drugs more readily than blonds and nervous persons. This is more apparent however in the administration of drugs which act decidedly upon the nervous system. Stimulants, as a rule, act upon nervous patients most forcibly, yet upon others their influence may be either tardy or ineffectual.

**Idiosyncrasy.**—We find occasionally an individual having a peculiar reaction against drugs, which is not merely temporary, as it is during menstruation, but is permanent during the entire life of the individual. This peculiarity may consist either (*a*) in too great reaction against this drug, or (*b*) in too little reaction against it, or (*c*) in an altered time of reaction.

Very small quantities of opium or of mercury may be sufficient to produce extraordinary effects upon certain individuals. One case is recorded where 1-80 of a grain of mercuric chloride was sufficient to bring about salivation in a patient. This is a very extraordinary reaction from a very small amount of a drug.

Not unfrequently we find just the opposite effect from the foregoing, where very large quantities of purgatives, for example, have little or no action upon the patient, and in some cases enormous quantities of opium may be taken by a patient who has not previously been accustomed to taking the drug, and yet it produces little or no effect.

The third reaction is that of an unusual consequence following the administration of a drug. For example in many instances quinine, and its allied substances such as antipyrin and phenacetin, will bring out a marked rash upon the patient's skin and at the same time may cause intense itching which almost drives the patient wild.

All these three different reactions are examples of the so-called idiosyncrasy, yet some of the results which are natural symptoms of idiosyncrasy may be brought about by habit. Strangely enough, the imaginative faculty is often the cause of idiosyncrasies, numerous instances being adduced by reputable authorities wherein either positive or fancied ills were affected through the agency of spurious (i. e., supposititious) remedies, such as bread pills, deceptive concoctions and the like. To some people, victims of acquired or inherited defect, certain drugs will produce unexpected results differing from their usual action.

These results, which should not be classified with specifically poisonous effects or with those of prolonged use, may not appear in many cases, and do not correspond as a rule with the admittedly poisonous symptoms. *Untoward effects* they are called, and they are of great interest from a medicolegal standpoint. The student is referred to Butler's "Textbook of Materia Medica, Pharmacology and Therapeutics" for a very interesting chapter on untoward effects of drugs.

**The Influence of Habit** is to diminish the susceptibility of the organism to impressions which under normal conditions would be speedy, and effectual. Only by gradually increasing the quantity of the dose can results be gained which under ordinary circumstances would require small doses. Thus patients accustomed to the use of alcoholic stimulants accept heroic doses of alcohol with little or no indication of the effects quickly perceptible in temperate subjects. Every physician has noticed the influence of habit, the resistance that has been acquired by gradually increasing doses of morphine, for instance.

Closely allied to habit is tolerance. We find in disease a condition which is known as toleration, and which is nearly allied to the effect of habit. A healthy person taking a dose of tartar emetic would become sick, but in inflammation of the lungs very large doses of this drug may be given to a patient who has no previous habit of taking the drug and yet no vomiting is produced. He has acquired what is known as toleration of the drug. In the same way we find that in cases of peritonitis very large doses of opium are tolerated.

The exact causes of toleration in all cases we do not know. It may be due to nonabsorption, to rapid elimination, to the neutralization or the destruction of the poison, or to anatomic peculiarities. The prolonged use of one drug may establish toleration for others of the same class. Thus chronic drunkards are not easily influenced while intoxicated by chloroform or ether, due to the fact, probably, that chloroform and alcohol act on the same nerve-cells in the same direction and probably induce the same changes in the tissues.

**The State of the Body** has a great deal to do with the activity of any medicine. We find, for instance, that during active exercise a man can stand a larger quantity of alcohol than if he were quiet. The explanation of this fact probably is that during active exercise the alcohol undergoes oxidation in the body and so has not the same paralyzing effect that it would have if circulated unchanged in the blood for

any length of time. When people suffer from high fever they can usually take larger quantities of alcohol than they could if the temperature were not raised. In these cases alcohol frequently seems to act not merely as a stimulant but as a food. In the healthy individual digitalis slows the pulse, but in cases of very high fever it seems to have little power in this respect, while persons in normal conditions greatly modify the effect of drugs by altering their excretions. This matter will be more fully discussed under the subject of absorption.

Where the kidneys are affected by disease the excretion of the drug may be lessened, and thus tend to cause the accumulation of the drug in the body. For this reason it is advised by many that opium and its alkaloids and mercury be sparingly and carefully used in cases of chronic Bright's disease, because these two drugs are likely to have an unusually powerful action in such cases. Opium will produce coma, and the mercury will produce salivation much more readily in persons suffering from chronic nephritis than they would be likely to do in ordinary conditions. Antipyrin, phenacetin, and the other synthetic antipyretics will reduce temperature where there is an elevation above normal, but they have no apparent effect upon the temperature in health.

**Antagonistic Substances.**—Often there are antagonistic substances present in the body which will prevent a drug from producing the effects that are expected of it. For instance, strychnine will have but comparatively little effect on the spinal cord of persons thoroughly under the influence of chloroform, while certain antagonistic poisons are formed in the tissues in the course of certain diseases which prevent certain remedies from having any effect. This is well seen in cases where the inhibitory cardiac nerve of the heart is paralyzed by disease, and in these the heart cannot be slowed to any extent by digitalis. So we notice how alteratives have the property of antagonizing the toxins of certain diseases. For instance, "A" and "B" are put under a prolonged course of mercury. "A" is salivated beyond recognition and is rendered

markedly anemic, while "C's" health improves, simply for the reason that "C" had syphilis which "A" had not.

**The Time of Day** has a great deal to do with the effect of drugs. Alcohol, as has been seen, is not well borne when the temperature is high, but is well borne when the vital forces are low. Stimulants are indicated usually and produce the best results at the period of the day when the vital forces are the lowest, and that is just about the early hours of the morning; ordinarily it is much better to give hypnotics and cathartics at bedtime, when their action coincides with the natural time of sleep. Stomachics and remedies which are designed to improve the appetite and digestion should be given upon an empty stomach, shortly before meals, as should also all drugs which are intended to be absorbed rapidly. Drugs which would irritate the mucous membrane of the stomach should not be given upon an empty stomach, but after a full meal. Saline laxatives, purgative mineral waters, are best taken early in the morning before breakfast. Occasionally it is necessary to have the bowels move just before bedtime, in which case some mild laxative may be given about noon.

Certain remedies are given for their temporary effect, as an emetic in case of croup, or a compound acetanilid tablet to relieve headache, etc. In all of these cases it is better to have the stomach empty, and to discontinue the remedy as soon as the effect desired has been accomplished.

**Climate** has a great deal to do with the effect of medicines. In hot weather, for instance, the system does not bear strong medication as well as it does in winter-time. In mild climatic districts large doses of quinine and other antiperiodics must be given in order to produce any decided therapeutic effect.

**Synergists and Antagonists.**—The effect of drugs is similarly influenced by unusual conditions, often induced by the simultaneous administration or the presence of other drugs. The effect will be greater when two drugs with similar action are given. In such cases the dose of each must

be smaller. This synergistic action is very important.

Example: Cathartics operate better when in combination with each other or with some other medicine than when given alone. By combining small doses of several cathartics the particular action of each can be secured without the undesirable qualities of any, and this combination is, therefore, practically a new medicine. Second, quinine and the mydriatics assist cathartics in their action, quinine especially increasing the power of magnesium sulphate. Another good example is the old pill of calomel, squill and digitalis. The mercury assists the action of the squill upon the kidneys, and the digitalis acts as an indirect diuretic by increasing the pressure of the blood and the blood-supply to the kidneys. One of the best examples is the hyoscine, morphine and cactin combination. As is well known, a profound anesthetic effect can be produced with one tablet containing 1-4 of a grain of morphine, 1-100 of a grain of hyoscine, and 1-67 of a grain of cactin, while if either of these drugs were given separately, not nearly so profound an effect would be produced.

**The Absorption of Drugs** into the body and cells of the body varies from a few seconds, as in the case of hydrocyanic acid, to a few days or weeks, as in the case of lead. When drugs are given by the mouth to produce constitutional effects it is very necessary that they be readily absorbed. Sometimes we dissolve our solid drugs before giving them, at other times we trust to their being dissolved in the intestinal canal, either by the liquid dissolving them specifically or by the gastric or intestinal juices dissolving them by chemical influence.

The rapidity with which drugs will act will not only depend upon the physical or chemical character of the drug, but upon the conditions which it meets in the stomach and intestinal canal. A soluble drug will be absorbed more quickly from an empty stomach than from a full one. Yet sometimes there are conditions of the stomach brought about by the local action of a drug which retard or prevent its absorption.

Besides, we find conditions of the stomach which alter the absorption of drugs, but which depend not upon the local action of the drug taken into the intestinal canal but upon other conditions such as those of the nervous system; we find also in cases where absorption in the alimentary canal has been arrested by disease, the drugs may remain a considerable time without being absorbed, but later undergo absorption.

#### **The Importance of the Liver.—**

There is one organ with which we always have to reckon in cases where we are giving drugs by the stomach, or the intestines, and that is the liver. Before any drug or any food which is absorbed by the stomach or the intestines and passes into general circulation, it must go through the liver, and the liver has the property of not only turning back foods or drugs that are likely to prove injurious to the body, but sometimes of actually destroying them. Many poisons when injected into the stomach and intestines are absorbed by the blood-vessels, carried to the liver, and are excreted by that organ; they are poured with the bile into the duodenum, and thence are again absorbed. So that certain poisons go on and on in regular rounds from the stomach and intestines to the liver, and from the liver to the intestines and back again, for days, and probably weeks, even months, without ever getting into the general circulation.

**Selective Cell-Action.**—Dr. Waugh has referred to the analogous process of food absorption, and argues that the individual cell has a selective power, and is therefore also able to control drug absorption. When a drug is administered, those cells needing the particular remedy will take it up, whereas the others that are not likely to be benefited by it do not absorb it. He draws the conclusion that it may often be advantageous to give several remedies together that are apparently antagonistic in action, with the expectation that only the affected cells will be influenced.

As an illustration he cites the good effects attending the simultaneous use of stimulants like strychnine and digitalin, and relaxants like aconitine or veratrine in pneumonia,

and urges further development of this therapeutic principle.

#### **Cleansing the Digestive Canal.—**

Other things being equal, a thorough cleansing of the intestinal canal previous to the administration of any medicine will favor the absorption of that medicine. This is often a vital point, the neglect of which may determine the failure of a course of medication otherwise excellent.

**The Duration of Action** of a drug depends partly upon the rapidity of absorption and also upon the rapidity or the slowness of its destruction in the body, or its elimination from it. Hydrocyanic acid, chloroform, ether, etc., are taken up very rapidly and are easily eliminated, but the duration of action of such remedies as these is not long. On the other hand, such drugs as potassium bromide, digitalis, etc., are not so quickly eliminated, and their duration of action is longer. In giving these drugs or similar ones, there is danger of what is known as accumulative action, especially if they are given in full doses at frequent intervals.

When digitalis, for instance, is given according to the old methods, or full doses, every three or four hours, you may find that suddenly the pulse becomes very slow or intermittent, and the patient complains of weakness, also shortness of breath, although you have not increased the dose of the drug. The reason for this is that digitalis has attained a certain power over the body and through its influence it contracts the renal vessels so that elimination is interfered with, and the urine which has previously been copious becomes scanty, the other organs of the body also becoming affected.

**Active-Principle Therapy.**—Many of these elements of uncertainty can be eliminated if we practise *dosimetry*, in other words, give our remedies in smaller doses and according to the method recommended by Burggraave. By this method every medicament, however great its activity, is as applicable in practice among children as among adults, not excepting those medicaments to the action of which children show the greatest susceptibility. Thus morphine,

strychnine, aconitine, for example, need not be excluded from such practice. Everything depends upon the appropriate indication and graduation of the doses.

The principle of administering the antispasmodics in minute doses clears away all difficulty and enables us to obtain satisfactory results. Even in the administration of such powerful drugs as aconitine, atropine, strychnine, etc., having taken the precaution of beginning with the smallest dose, of watching its effect, and of increasing or diminishing the fractional doses, as circumstances demand, we can feel secure against all risk of accidents. As has been well said, the great dangers of dosimetry, therefore, are reduced to this: These are the great crimes of which it has been accused; these are the reasons which prevent our adversaries from adopting our method. This is the retort which we give to the accusation against the system, viz.: Dosimetry is effective without ceasing to be inoffensive; it is inoffensive without ceasing to be effective.

### ALKALOIDAL THERAPEUTICS

We will consider some of the advantages which the active principles already isolated and placed in our hands for use have as compared with the older preparations.

**Unreliability of the Galenicals.**—Our first point is as to the unreliability of the older preparations: the fluid extracts, tinctures, infusions, solid extracts, and in fact all preparations manufactured from the crude drugs. The prime difficulty with these preparations is their lack of uniformity of strength, and this depends upon several causes. In the first place, the plants from which they are derived do not produce the alkaloids in uniform proportions. We must remember, in treating of these things, that these alkaloids are not produced primarily for the use of man, but for certain needs of the plant itself. Varying conditions of heat and cold, moisture and dryness, sun and shade, soil, season, location, all the conditions in fact under which a plant grows, modify to a greater or less extent the production of the active

principles. In the cultivation of the cinchona plant, in the East, it was found that sunlight caused a destruction of the alkaloids, which were converted thereby into coloring matter; and by the simple expedient of wrapping the trunks of the trees with moss the production of the alkaloids in the bark were enormously increased, the sun being thereby shut out.

We all know that digitalis grown wild in Northern Europe is the best medicinally, while that cultivated by the Shakers in Pennsylvania has no medicinal properties whatsoever. A few years ago Petrescu, of Bucharest, astonished the world by his bold use of digitalis in pneumonia, giving up to one and one-half ounces in twenty-four hours. But the mystery was explained when the Roumanian digitalis was found to have scarcely any medicinal activity, and only these huge doses gave this fine clinician the results for which he administered the drug.

### Lack of Uniformity of Strength.

Next, the strength of these preparations varies with the methods employed for their extraction, with the condition of the drug, its age, the constant deterioration that takes place after the drug has been placed on the market. As soon as the preparation has been made, deterioration begins. On the one hand there is the gradual destruction of the active principles, with the formation of more or less inert substances; on the other hand there is the evaporation of the water, and still more of the alcohol, by which the preparation grows stronger through greater concentration. Obviously, if the cork happens to be loosely inserted in the bottle and it is in a particularly warm place, near the stove or where the sunlight strikes upon it, the evaporation will be rapid, and the tincture of aconite, for instance, which may be exactly of proper pharmaceutical strength today may shortly be two or three times as strong. Pharmacists properly qualified are fully aware of this fact. In a leading drugstore in Philadelphia it has been the custom to throw away all liquid galenic preparations every spring, so that none ever stood on their shelves that were

not less than one year old. This drugstore enjoyed the confidence of the physicians to a greater extent than any other in that city. Physicians would send miles, passing many other drugstores, in order to have their prescriptions put up at that place.

Specimens of belladonna bought on the open market vary in their strength over a grade of one to fifty. Suppose you have been giving your patient the lowest grade, the "one" grade, we will call it; you have by experimentation found exactly the dose that you wish in order to produce the effect. The prescription happens to be refilled with a fresh bottle from the same druggist, or from another druggist, with the "fifty" grade, and you suddenly find that you have given your patient fifty times more than you desired. What would be the consequence?

Opium varies in its morphine-content from 2 to 18 percent, and the laudanum and paregoric made from opium must vary accordingly.

The result of this uncertainty as to the strength of preparations is seen in the physician's practice. He is timid and uncertain; he does not know exactly what his drug is going to do, that is, how much it is going to do, and he commences with very small doses, gradually increasing until he has reached the effect he wants. But in the meantime precious time is lost, the lack of decision, the lack of energetic interference at the beginning of a disease, nullifies the physician's efforts, and the disease will have firmly established itself before his slow, timid therapeutics has had a chance to dislodge it.

**Uncertainty of Effect.**—My next point is as to the uncertainty of effect of remedies. Most plant-remedies contain more than a single active principle—some of them many, as for instance opium, from which twenty-six different active principles have been isolated, no two of which have exactly the same effect. The effects of these moreover vary around a complete circle, from the pure sedative effect of morphine to the pure stimulant effect of thebaine. Besides these, there are offshoots. Codeine, for

instance, closely resembles morphine, and is superior to it in two respects, namely, in relieving cough and relieving pain below the diaphragm. Narcotine is another offshoot: it has remarkable antiperiodic effects fully equal to those of quinine. The others have not been very well studied. Thebaine closely resembles strychnine in its action, but it has some properties which distinguish it from the latter.

#### **Variation in Active-Principle Content.**

—(a) *Opium*: With the various conditions under which a plant grows, these active principles are developed in varying proportions. Thus in one specimen of opium you may find, for instance, 18 percent of morphine and in another only 2, while the other constituents will vary in like manner, and so it is a matter of uncertainty as to which is going to predominate in any given specimen of the plant.

(b) *Jaborandi*: Then, again, jaborandi. This drug contains six alkaloids, the principal one, that which predominates, is pilocarpine, and this, as you know, causes salivation, induces profuse sweat and stimulates the secretion of milk by the mammary gland. But sometimes jaborine predominates, and in a fluid extract of jaborandi used by the writer at one time it predominated to such an extent that instead of increasing the milk of the nursing mother to whom it was given for that purpose, it actually dried up completely what little secretion she did have.

(c) *Hyoscyamus* is another drug which contains two antagonistic principles: hyoscyamine, which stimulates the brain and causes delirium, and hyoscine, which sedates the brain and produces sleep. Sometimes the hyoscine predominates and then we have in this drug a most excellent sedative, one that soothes sensibility, relieves pain and induces restful slumber. But sometimes the second alkaloid, hyoscyamine, predominates, and then we have exactly the opposite effect. The consequence is that hyoscyamus is looked upon as such an uncertain remedy that it is practically never used at the present day, except as an ingredient of combinations given for a sooth-

ing purpose; and here it is used rather as a mark of deference to old ideas than from any belief that it is really of much value. It is combined with chloral, a bromide and cannabis indica, in the hope that somehow the combination may meet the desired need.

(d) *Digitalis* is still another of these remedies, and as this is the most prized of all the cardiac tonics, it is especially important to us that we should have a preparation of it upon which we can absolutely rely. Nevertheless, we can do nothing of the sort. This plant contains five glucosides. One of these is supposed to be inert; three give in varying degrees the three principal effects for which digitalis is prized, namely that of a tonic to the heart, a contractor of the blood-vessels, and stimulant to the action of the kidneys; the last glucoside is, however, diametrically opposed to the preceding, since it sedates the heart and relaxes the blood-vessels. The proportions and quantities of these which exist in the digitalis leaves are variable. Hence from one preparation we may get a heart-tonic effect, and from another that of a heart-sedative. The writer knows this, since many years ago a patient of his fell dead from paralysis of the heart soon after taking a dose of digitalis. In this the digitonin, which is the sedative, markedly predominated; and probably there was little if any of the other principles present. So valuable, however, is digitalis, that physicians all over the world disregard the possibility of this and make use of the whole plant-drug because there is, after all, nothing quite so good.

Nevertheless it is not a wise thing to make use of an uncertain preparation when one that is certain in its action is obtainable; and we are assuredly at home with digitalis, since one of its glucosides, when extracted and given in a state of chemical purity, gives all the advantages of the drug without any of its disadvantages. I refer here to digitalin, or as it is usually known, Germanic digitalin. This glucoside is relatively weaker than the others, in that it must be given in much larger doses, 1-4 of a grain being about

equal to 1-100 of a grain of digitoxin. But whereas digitoxin takes thirty-six to sixty hours to produce its effect, that of digitalin, or Germanic digitalin, is produced within three minutes. Digitalin is soluble in water, hence it may be administered hypodermically. Not only this, but we get its effect quickly and it is quickly eliminated, for it affords us a maximum of cardiac tonic effect with a minimum of vascular contraction. Digitoxin, on the contrary, is the most powerful vascular contractor known, so powerful in fact that complete suppression of urine may result from its constrictor effects on the terminals of the renal arteries. It is therefore a dangerous drug, as it closes up the avenues by which it could be eliminated from the system. Digitalin, however, has no such action and hence is as safe as well as quickly effective drug.

The result of these varied and combined uncertainties as to the use of the galenic preparations is such that the physician never administers a new preparation of any of them without anxiously watching to see what effect there is going to follow. There may be some effect or none, it may be what we want or it may be something entirely different. Generally, after watching the result a few hours, we find it necessary to modify our prescription, strengthening one part of it, weakening another, or changing it altogether. How often does it occur that we go in to see our patients for the first time, administer the remedy and go home, not merely hoping but actually knowing exactly what is going to occur? Not very often.

The result of all this is that the vegetable materia medica has practically been laid aside by the profession, physicians coming more and more to confine themselves to the use of exact chemicals which at least give us a certain degree of positiveness as to the effects that are to follow. Nevertheless we believe that the riches of the vegetable materia medica are too precious to be laid aside. We believe that they cannot altogether be replaced by the chemical materia medica, that there are priceless remedies in the growing plant which can be and ought



to be utilized for the relief of human suffering and the saving of human life.

#### *Advantages of Alkaloids*

When we employ the naked alkaloids a different condition of affairs exists. In the first place, we know exactly what they are going to do; in the second place, we know exactly how much effect is going to follow the administration of so much of the drug. Our duty here is then a simple one: we must appreciate exactly the disorder in function which constitutes the illness we are treating. We must know exactly which of the active principles of given drugs will exactly remedy this condition.

**The Dosimetric Method of Giving Remedies.**—Then what are we to do? The one thing we do *not* know is the exact reaction of the organism of that particular patient against that particular drug at that particular time; and this we ascertain how? By dividing the full dose suitable for an average adult into ten parts. We administer one part of these every five, ten, fifteen or sixty minutes, according as the occasion may require and until we get exactly the amount of effect we desire; then we stop. It may be that two or three of these minute doses suffice; it may be that they require five, fifteen or twenty; because men and women will always differ in this respect, that is, their individual reaction against drugs. But if we give in this way, repeating until we get exactly the effect we want, we are certain never to have an overdose and never to have an underdose, but dose enough, exactly, for the need. Such precision is absolutely impossible with drugs when we do not know how strong they are or what effect they are going to have. We may guess, we may think, we may hope, we may expect, but we do not know; and the scientific application of remedies requires men to know.

The results of such directly acting certainties in medical practice are exceedingly far-reaching. For one thing, it makes the physician exceedingly careful in his appreciation of the abnormal conditions presenting in the patient, that is, in his diagnosis.

Next it makes him solicitous in his study of the action of the drug, that he may be exact in its application.

#### **Rapidity of Action of the Alkaloids.**

—The reason for this is that they are presented in such a state that they are quickly dissolved, absorbed and assimilated. The inert substances and astringents which are administered with the active principles in tinctures, extracts and similar preparations hinder the absorption of the true active principles, for whose sake the dose is given. This of course applies more to crude powders of the root, bark, leaves, etc., than it does to the extracts. Alcoholic extracts and tinctures are more easily absorbed than others; nevertheless, tincture of digitalis requires about three-quarters of an hour before it is absorbed from the empty stomach. I have obtained opiates from the stomach many hours after they were swallowed.

This delay is of importance in two ways: In the first place, instead of getting the effect of our drug quickly, it is slowly absorbed and the effect is diminished; we require much more of the drug to get the desired effect than would be the case if it were thrown into the stomach at once. In the meantime the disease-process is going on.

Sometimes the conditions in the digestive organs are such that instead of a dose of the old-fashioned remedies being absorbed, it may lie for hours or perhaps longer in the alimentary canal. Sometimes these are collected there for days even, then something occurs, possibly the secretion of excessive acid by the stomach, and the whole quantity is absorbed at once. We then have poisonous substances instead of remedial ones. All this is avoided when the clean alkaloids are administered in simple solution in water, where they may be quickly absorbed, taken up and disappear from the stomach in a few minutes after administration.

**Concentration.**—Let us go back to the time when powdered Peruvian bark was administered for malarial fevers. The dose was one ounce. Besides the alkaloids this contained the woody fiber, coloring matter, astringent acids and other worthless ingredients. In fact, the 480 grains com-

prised in an ounce of the substance contained about 468 grains of useless encumbering dirt. It was a good deal to ask the stomach to retain such a dose; quite frequently it would not do so. If it did, by the aid of whisky or opium, in the course of some hours the alkaloids would gradually be dissolved out of the mass and we would get an effect.

In the course of time the druggists reduced this by making an extract, and from about 30 grains of this extract we obtained the benefit previously secured from the 480 grains of the powder, and we obtained it in a great deal quicker time. Pharmacy went still further and presented us from 10 to 12 grains of pure quinine, from which we got all the benefit we obtained from the full ounce of powdered bark or from the 30 grains of extract, and we obtained it much more quickly, with less irritation to the stomach.

This opened up a new field for the usefulness of quinine, which has since been employed in innumerable instances where it would have been an absolute impossibility to administer the crude bark. Take for instance Juergensen's treatment of pneumonia. The dose of quinine is from 60 to 75 grains. How would it have been possible to ask the stomach of a pneumonia patient to take doses of 4 to 6 ounces of the powdered crude bark! It is posterous.

Besides this, the naked alkaloids and their salts may be administered hypodermically, and thus relieve the irritated stomach of the necessity of taking up any medicine whatsoever, besides getting the effect in much quicker time and with much smaller doses than when given by the stomach.

**Abortion of Acute Disease.**—One curious fact is noted in our review of medical literature. Not since bleeding was dropped by the profession has it seriously considered the possibility of aborting acute fevers. The remedies which we used after that powerful weapon fell from our hands were not sufficient for the purpose; and even now many in the profession claim that it is impossible to abort a fever. But as the alkaloids come more and more into use, we find

that the old ideas are resuming their sway, and those who employ the alkaloids and become familiar with them, now assert confidently their ability to abort many febrile attacks if they are taken early.

If you are well read in the old history, you will find that physicians who used bleeding also urged that it be used at the earliest possible time; for instance, in pneumonia during the hyperemic stage before the occurrence of effusion; and they insisted positively that only at this time could such attacks be aborted. We find now the alkaloidists saying the same thing, that by the use of their powerful remedies these diseases can be aborted when taken at the earliest possible time.

In fact, of the many advantages afforded by the active principles the quick solubility and absorption and consequent quick action is by no means one of the least.

#### **Portability of the Active Principles.**

—They constitute but an exceedingly small portion of the crude drug; as compared with even the bulk of the extract theirs is very small. Those who carry their medicines with them—and every physician in active practice must carry some—if they use the old preparations, are compelled to carry around about four pounds of dirt for the sake of one ounce or a half-ounce of alkaloids. This renders the carrying of medicines cumbersome, and the physician naturally is limited in the number which he can carry. Using the naked alkaloids, however, matters are entirely different. A physician can slip into his vest pocket a 12-vial case, containing 1200 doses, of twelve to twenty-four different remedies. With twelve remedies we can confidently assert that nine-tenths of the emergencies met in practice may be met.

Those who use these certainties soon acquire a nicety in their application which leads them to demand many more remedies than these. For the remaining one-tenth of the needs met one may not demand twelve but two hundred different remedies. However, this does not destroy their portability. One of the granule cases contains 120 vials, and by the use of tablets and granules the

physician may, if he likes, put two different remedies in each of these vials, making 240 different remedies at his command; and surely there are very few physicians who require anything like this number.

Two hundred and forty remedies! What possible emergency in medicine could occur which could not be met with one or a combination of these? Nevertheless, the entire weight of this case, when filled with nearly 30,000 granules is about 3 1-2 pounds; and it is small enough to be carried in an overcoat pocket. It would be rather difficult for a physician to carry 30,000 doses of the old-fashioned remedies on horseback. The ordinary saddle-bags would not contain anything like this number.

This portability adds celerity to the doctor's movements. Called in a hurry, he can slip his case into his pocket, jump on his horse, in his automobile or on the train, and be off in a minute, instead of hunting around and gathering together his supplies, and then calling up a sleepy servant to help carry it to the depot; and in some emergencies, the doctor who gets first to the case, has his remedies there, can administer them and have the patient pretty well along recovery, or at least toward relief, before the other doctor has arrived; and in this hustling age that is not a matter of little importance.

## PHYSIOTHERAPY

### HYDROTHERAPY (CONTINUED)

Before taking up the various modes of hydriatic application and the clinical indications for their employment, a few more physiological considerations will serve to make the subject of clinical hydrotherapy still clearer, both with reference to its theoretical groundwork and therapeutic superstructure.

**The Overtowering Importance of Reaction** cannot be too strongly emphasized nor too frequently repeated. It is the physiological process, or rather phenomenon, by means of which hydrotherapy produces its manifold and far-reaching therapeutic

effects. Through its instrumentality *we are able to produce heat by means of cold.*

The cutaneous surface to which the cold application (immersion, douche, pack) is made, first becomes anemic, blood-pressure and skin-action are depressed. Then reaction takes place. The area concerned receives an enormous supply of blood; blood-pressure and skin-activity are increased. Depletion of the deeper structures coincidentally accompanies the secondary hyperemia of the skin which our cold-water application has brought about.

Suppose, however, reaction is sluggish in making an appearance or does not take place at all—what then? The primary action of a cold application causes anemia of the surface and a corresponding congestion in the internal parts. If reaction does not unload the congested deep structures and cause the surplus to be carried to the surface, a congested condition of the internal parts will be the result.

The congestion may be in the nature of a passive hyperemia (venous congestion, subacute inflammation or "catarrh") or of an active inflammatory state, depending on the idiosyncrasy of the individual patient and on many factors arising from the physical condition of the patient's body or from pathologic processes of more or less gravity, and extent transpiring in the organism.

**What will be the Result of the Congestion Produced?**—Even the older physicians recognized but did not attempt to account for the peculiar fact that not all parts, organs, tissues or structures of a patient's body possess the same degree of resisting power. The term "*locus minoris resistentiæ*" (points of least resistance) refers to the peculiar well-known, often observed but never satisfactorily explained clinical fact that suddenly induced internal congestions (such as may follow exposure to a cold draught, and coincident chilling of the body-surface) may involve one or the other internal organ. It may be the intestinal canal, the stomach, the liver, the lungs, the bronchial tubes, the bladder, the deep lumbar muscles, and so on, *ad infinitum*.

**What is "Catching Cold?"**—In the language of the people, the person has "caught a cold," i. e., the body-surface has been chilled in some manner or other, the result being cutaneous anemia and deep hyperemia without reaction. The internal hyperemia is not relieved but has produced irritation at some point of least resistance, the result being an intestinal or gastric indigestion, a diarrhea, a bilious attack, a catarrh or inflammation of the lungs, or bronchial tubes, a catarrhal condition of the bladder, an attack of lumbago or any other of the thousand possible manifestations of a "cold."

Hydrotherapeutically, this is of the utmost significance. A "cold" (using the word in the sense indicated) would be the result of a cold-water application which is not followed by reaction. This is a clinical point of importance. The absence of reaction after a cold-water application to the skin may under given circumstances lead to disastrous results especially in cases where an already existing congestion is aggravated and thus fanned into an active inflammation.

**Where Lack of Reaction Means Danger.**—In chronic inflammatory conditions of the kidneys (chronic Bright's disease) a complication such as indicated above is a most serious and usually fatal accident. For this reason it is recognized by all experienced hydrotherapeutists as a well-established clinical law, to-wit: that *cold-water applications to an area of any extent are to be used with extreme caution or are best avoided in all conditions characterized by a loss of tone in the arterial walls.*

Wherever and whenever there is a disturbance in the physiological equilibrium of arterial and venous pressure (this disturbance being equivalent to a tendency toward venous sluggishness and passive congestions), reaction is either very imperfect or entirely absent. Under these conditions cold-water applications to the surface are manifestly of questionable propriety.

*Reaction must be brought about at all hazards.* It is sometimes necessary to encourage the secondary cutaneous hyperemia by forcible rubbing or massage of the sur-

face. By all odds the safest plan is to exercise careful judgment in adapting hydrotherapeutic measures to clinical conditions.

In cases in which reaction is doubtful it is safer to adopt hydriatic modes of application that do not involve the question of reaction (see page 423, March number). If it is desirable to unload the internal parts and increase blood-pressure and functional activity in the skin, a continuous application of heat is safe, though not as intensely effective. This would be what we have previously designated a nonreactive application. A good illustration is the use of the cylinder in which the patient is exposed to superheated air (baking).

**Reaction-Applications are Dangerous with Weak Arteries or Heart.**—Another contraindication of reaction-applications is of sufficient importance to merit passing notice. Forcible changes in the blood-pressure are not without danger, in fact sometimes positively disastrous when there is disease in the vessel-walls (calcareous, fatty, etc., degenerations, changes due to syphilis). Possible results of reaction applications in persons with diseased arteries are ruptures of vessels, internal hemorrhage, apoplexy, embolus, thrombus, etc. The same holds good when there is a serious organic disease of the heart.

**The Function of the Skin.**—In order to understand the phenomena of metabolism in their relation to hydrotherapeutic applications, let us call to mind a few physiological facts in connection with the part which the skin plays in the economy. The self-consumption of the organism (oxidation) takes place at a certain temperature (normal body-heat) which is the outward manifestation of the process of self-destruction and self-regeneration going on in the animal body. Nature guards against the accumulation of heat-units and causes these products of oxidation to radiate through the skin.

The skin is a safety apparatus by means of which the heat-making process is automatically guarded. The radiation of heat through the skin takes place in a gaseous, vaporous or aqueous form. Sweat is the

most intense effort of the body at heat radiation. Sweat is "concentrated heat." If the combustion within the organism takes place with greater rapidity than under normal physiological conditions, the output of heat-units will be correspondingly greater. Thus we have elevated **temperature** (augmented output of heat-units) due to fever (accelerated and intensified metabolism). The former is the effect and outer manifestation of the latter.

In being able to control blood-pressure, blood-distribution and organic activity by means of hydrotherapeutic applications, we are able to influence the vital phenomena included under the head of "metabolism." By being able to influence the functions of the skin, we are in a position to control the heat-output of the economy. In the sense indicated the hydrotherapist becomes the master of the situation at the bedside of the patient whose physiological machinery is working under increased pressure (febrile condition) as well as of the patient whose organic functions are slow and imperfect, whose condition (suboxidation, a febrile catarrhal state, passive congestion) imperatively calls for a stirring up of the vital forces by augmentation and acceleration of the metabolic changes. Thus we surmise that the domain of practical hydrotherapy is as large as clinical medicine itself. That this statement is borne out by fact and experience, our subsequent considerations of the subject will show.

For the sake of completeness let us remember that diaphoresis (concentrated heat-units radiated through the skin) has another clinical significance in connection with hydrotherapeutic applications. Nature maintains the physiological proportion of solid and liquid elements in the body. When forced diaphoresis takes place, the proportion of liquids and solids is disturbed, the liquid constituents becoming relatively less. Nature at once tries to reestablish the normal proportion by drawing upon the (physiological and pathological) fluids present in the body. Then a powerful absorptive process is inaugurated, another of the secondary effects produced by water application.

**Modes of Application.**—A "mode of application" is a certain manner of procedure for the purpose of producing a definite physiological effect. Since the physiological effects of water applications are dependent upon the character of the "reaction," the degree of temperature employed, and the length of time consumed in the action of the thermic stimulus, the different "modes of application" are suggested by the three factors named. It is of no concern whether the effects are produced by a douche, a pack or any other variety of hydrotherapeutic technic. The various technical varieties we shall have occasion to consider separately, not as "modes" but as methods of application.

There are three different modes of application, to wit: treatment with very high, very low, and with indifferent temperatures. Each of the three divisions may again be subdivided into short and continuous applications.

**Short Applications of Very Cold Water** by means of a quick immersion or a suddenly applied douche produces thermic shocks of great intensity. The stimulating effect on the nervous system and on the respiratory movements are well marked and can be carried to the point of intense excitation.

The same effects, although not as pronounced, are produced by *short applications of very hot water*.

The after-effects (reaction and continuous stimulation) are better if very cold water is used. Hot water suddenly applied stimulates for the time being but usually brings about a sluggish condition of the circulation. The therapeutic effects of these short applications, especially of cold, make the latter available in the treatment of any and all conditions requiring prompt and powerful stimulation, for example extreme exhaustion, collapse or shock, psychic disease, chloroform, drowning, suffocation, etc., etc. Many authors, notably Winternitz, recommend the alternate use of hot and cold applications of short duration.

**Intense Heat**, if applied to the body-surface for a long time, is distinctly stimulating up to a certain point. When the skin be-

comes very active and diaphoresis is copious, the stimulating action is quickly supplanted by depression which, however, passes off promptly the moment the application is interrupted.

**Intense Cold Continuously Applied** is depressing if the application is made to an area of any extent. The depression may lead to collapse and death. Intense cold locally applied, as in the form of an ice-bag, is not an unalloyed boon. Continuous applications of ice to an injured or inflamed part are absurd. They represent the most irrational interference with nature's reparative efforts imaginable. The same can be said about the use of ice or ice-water in cases of sunstroke. In these cases the object of treatment should be to stimulate the skin and in this way aid in the radiation of surplus heat-units from the heat-consumed organism. The absurdity of contracting the skin and depressing its functional capacity is plain. Warm and even hot applications supplemented by friction and massage would increase the circulation in, and functional activity of, the skin. The moment diaphoresis begins in these cases, the tide turns in the patient's favor. In a general way we may say, therefore, that continuous applications of cold are of questionable therapeutic utility.

**Moderate Cold, Moderate Heat or Indifferent Temperatures** are respectively slightly stimulating, slightly sedative or entirely neutral. An indifferent temperature (say between 90 and 100 degrees) has no distinct thermic effect. It is sedative because it obtunds the skin-nerves by endosmosis. (See page 421, March number.)

We are now prepared to understand why continuous applications of heat or cold occupy a rather inferior position therapeutically. They are nonreactive. They fall short of accomplishing those characteristic physiological effects that are only possible through a preceding powerful reaction. The latter is brought about by short applications of cold, the technic being adapted to the forcible attraction of blood to the surface and to the continuous action on the excreting organs in the skin.

**The Question of Technic** brings us to the consideration of the various methods of applying cold, warm or hot water to the skin. There are three principal methods, to-wit: the *immersion*, the *douche*, and the *pack*. To these we may conveniently add the *vapor* or *steam bath*.

**Immersion** refers to all kinds of baths, complete or partial, be they in stationary water (tub, etc.) or in flowing water. The whole body or any part may be immersed. The patient may stand, sit, lie or float in the water. The bath may be short or long in duration.

The physiological effect is determined largely by the duration of the bath and, above all, by the temperature. From what we have had occasion to note concerning the physiology of various kinds of water applications, effects of different kinds might be produced and should, of course, be adapted to the requirements of treatment in the individual case.

The most characteristic effects follow the short immersions in cold water whereby the reaction in the cutaneous circulation is produced. In cases of fever, notably typhoid fever, this kind of hydrotherapeutic application is, indeed, of inestimable value. It makes no difference whether the short cold application is made by means of an immersion, a sponging, a douche or a pack. In this country this tub-bath enjoys a high degree of popularity and in the larger hospitals is used almost exclusively in the treatment of fever-cases. What is the physiological *modus operandi*?

Suppose that the patient we are handling is suffering from typhoid fever. The thermometer shows a rectal temperature of 105°F. The patient's skin is dry and hot. The patient's condition is distinctly one of toxemia. The toxic products of a faulty metabolism are distributed throughout the system. The brain is cloudy, owing to poisoning of the brain-cells. The system is working under increased pressure and by intensified and accelerated oxidation, and which process presents itself under the phenomena grouped as "fever", tries to destroy the poison and regenerate the system.

**Physiologic Action of Immersion.**—If a short application of cold water is made to that patient's body, what is the result? The moment the patient is taken out of the water and vigorously rubbed dry, the activity of the skin will begin. The pent-up surplus of heat will be liberated and a copious radiation of heat-units will take place. The temperature will be reduced, metabolism stimulated and a general improvement in the patient's condition will take place. Do not lose sight of the explanation given. The reduction in the temperature is not produced because the body is hot and the water cold. It is not a mechanical thermic effect, but a distinctly physiological action. If we were to put the patient into a hot bath instead of a cold one, some stimulation would begin and the temperature would drop. The effect, however, would not be as intense as it would have been after a cold immersion, because the reaction is absent and the peculiarly stimulating action of cold on the nervous system and respiration is missing. Let us bear in mind that in these cases both cold and hot water are antipyretic in action.

**Immersion of Certain Parts of Regions** is frequently of great benefit, e. g., the so-called *sitz-bath* in the treatment of pelvic and abdominal affections. In surgery the constant hot-water immersion in cases of severe bruises or lacerations, such as the crushing of hands and feet in railroad surgery, is very useful.

**The Douche**, sometimes called affusion, is a pouring of water over a certain part, or a dashing of the same against a surface with more or less force. The physiological effect of the douche is the joint product of the thermic shock and the suddenly applied pressure. Its character and duration depends on the part to which the douche is applied, the force with which this is done, the temperature of the water, the extent of the area treated and the time consumed in applying the douche. The cold douche is a powerful reactive measure and became famous through Father Kneipp, the great lay-hydrotherapist of Bavaria.

In a measure the *plunge-bath* is a douche on a large scale combined with a complete

immersion. The *sponge-bath* is a mild form of the douche combined with gentle massage of the surface. A modification of these reactive measures is the *walking bare-foot in wet grass or fresh snow* advocated by Father Kneipp. All these various hydrotherapeutic methods, while differing in their technic, are variations of the fundamental principles which we have discussed above. The application of the douche does not involve the use of a costly modern equipment. Father Kneipp did some of his best work with a sprinkling can.

**The Pack** was introduced into medical practice by Vincens Priessnitz and is probably the most effective and yet most simple hydrotherapeutic application. It consists of a cold moist cloth over which dry pieces of woolen material are placed. It may be applied to any part or parts or to the whole body, i. e., from the feet to the neck. The best-known form of this application is the cold compress used in cases of sore throat. The result of the cold moist pack is primary anemia of the surface, powerful reaction and resulting depletion of the congested part (derivation). Packs of this kind may last thirty minutes, an hour, two hours or even longer.

For the present let us try to grasp the wonderful adaptability of hydrotherapy to the requirement of practical medicine. It would be a serious error to imagine that the successful practice of hydrotherapy requires an expensive modern equipment. The latter is desirable but by no means essential. The best surgeon is he who can do good work with the most primitive means. The best hydrotherapist is he who can do his work with such simple auxiliaries as nearly every household can provide.

#### COMMENTS ON THE LESSON

**The Technic of Making a Hypodermic Injection** was described in the various papers in the usual lucid manner that we now expect from all of our students. Most doctors gave the ideal method which is adapted to hospital or the better class of private practice, but not so well adapted to emergency work under unfavorable circumstances.

Dr. J. W. Keppel, of Youngstown, Ohio, after describing the usual method, goes on to say: "But if life and death is in question, I use ordinary water, heating over a lamp or gas jet; draw the syringe nearly full of water through the needle and force onto the tablet in a clean spoon; and then draw in again and repeat this until the tablet is in solution. By this time the solution will be about the right temperature. Pick up a fold of integument between the forefinger and thumb and thrust the needle in in a slanting direction above the grasp and, withdrawing a little, force the contents slowly into the subcutaneous tissue and then withdraw briskly. Complete the process with gentle massage until the tumor has disappeared."

**Accidental Injection of Morphine into a Vein and its Treatment.**—Very few physicians report experiences such as that related by Dr. Chenoweth in the March number of *CLINICAL MEDICINE*. Practically all say that they never had such an experience, although some of the papers examined were written by doctors who have been in practice 25 or 30 years. The editor is inclined to believe that careful selection of the site for making an injection will practically eliminate all such experiences.

Dr. W. Taylor Edmunds, Ferguson, S. C., gives the following word-picture of the accidental throwing of a dose of morphine direct into a vein: "Should you be so unfortunate as to perforate a vein and send the entire dose in at once, in a second there appears a tingling sensation in the soles of the feet, rapidly extending to the head, so suddenly and violently that it feels as if your brain were suddenly clasped in a vise; a hot surging wave goes over the entire system, and unless you can soon get to a basin of cold water and plunge hands and head in, you will surely think your time has come. It is the most awful sensation that one could possibly experience. This passes off in a few minutes, though it seems hours to the sufferer." Atropine, gr. 1-100 or gr. 1-50 was recommended in all answers as the proper antidote for such an accident.

**Solubility and Toxicity.**—Dr. Richard Connel, North Yakima, Wash., illustrates

his idea on this subject as aptly follows: "To Mr. A., having sthenic fever, I administer 1-134 of a grain of amorphous aconitine every half hour, until tingling of the lips, fingers and toes is manifested. Upon examination I find the temperature has been materially reduced and the patient is resting better. I have so far given this patient twelve 1-134-grain doses of amorphous aconitine, and withdraw it entirely or administer it at longer intervals. The next patient, Mr. B., has asthenic fever, but I am informed that the tingling shows up after two granules of 1-134 grain have been given, when I withdraw my remedy. Had I continued to administer the same dose to Mr. B., he would likely have been a dead man. Therefore it is impossible to calculate the active portion of any dose whatsoever."

**Maximum and Minimum Dosage.**—F. F. Attix, Lewistown, Montana, says: "I have tried the maximum- and minimum-dose theory in practice, and cannot defend it. Its weak points are: (1) Varied therapeutic activity of drugs, especially galenics; (2) idiosyncrasies and occasional alarming results in patients so treated; (3) it does not give the best clinical results. By "dose to effect" is meant the frequently repeated fractional part of the so-called "maximum" dose until we secure the effect and results desired. This is accomplished by securing the proper accumulative dose, without the toxic results which occur with the older methods."

Dr. J. A. De Moss, Thayer, Kan., says: "Maximum and minimum dosage cannot be defended, since constitutions and absorbability vary in every case. While a "minimum dose," so called, may be a lethal dose in some cases, there can be no standard dosage fixed of active drugs. That the student may know the danger-line and the probable boundaries of safety in medication, some dosage as a safeguard must be advised, but practically the medication of every patient is an experiment of drug-toleration and therefore:

"We must begin the use of active remedies in the least possible amount that has a



therapeutic effect and by repeated dosage push the remedy to the point desired. The amount used is the dosage per diem, or per half day, or per six hours, or per hour, as is required for that particular patient at that particular time of treatment, and is the only rational, safe and scientific method of medication."

Dr. E. M. Stewart, Imperial, Neb., says: "Some standard would have to be fixed, or we should not know even the small dose to effect. A small dose of one drug may be a large dose of another; also in different preparations of the same drug. Some standard according to their therapeutic effect must be established. However, it is of great importance to know the therapeutic effect of maximum and minimum dosage, as the action is quite opposite in many drugs. The minimum dose for one person may be a maximum dose for another; what soothes or overheats one patient may excite or refresh another, or *vice versa*. Also idiosyncrasies and cumulative action go to overthrow any set maximum or minimum dosage. I like upon my first visit in most cases to give a good dose of saline laxative to test the condition of the stomach. I also use calomel, gr. 1-4 for two or three doses, as needed, and if satisfied in regard to absorption and elimination, I am then ready for the active principles."

**Saturation.**—The general idea conveyed by most of the answers to question VII on the saturation of the system with a drug, was that the system was saturated when the blood would not absorb any more. This might be true of a few remedies that are practically insoluble in the blood, but with remedies that are soluble and also toxic, if this were carried out, death or very bad results would inevitably result. A better answer would be that the patient is saturated when the desired therapeutic effect is attained or when the limit of physiological tolerance is reached beyond which it would be dangerous to push the remedy.

#### RESEARCH QUESTIONS

**Accidents and Dangers from Hypodermic Injections** elicited a variety of

answers. In a general way the dangers enumerated were: needle abscess; injecting the medication into a vein; tendency to the formation of drug habits; introduction of air into a vein; breaking of the needle; hypermedication, as when morphine is injected for biliary colic with quick subsidence of the pain, leaving the patient with nothing to counteract the morphine narcosis.

**Injection of Air into a Vein.**—In the editor's opinion, such an accident is far less important than the majority of authorities would have us believe. One of our students says: "I think it would take a great deal of skill to inject enough air into a vein to do any damage. However, I always guard against it as much as possible." While we believe that it is well to recognize the possibility of such danger, and use every precaution to avoid them, we are of the opinion that many accidents following hypodermic injections have been wrongly attributed to this cause.

Dr. J. A. Poirier, Forest Lake, Minn., says: "Air entering into a vein may cause an air embolus, which in turn may cause the right heart to be filled with frothy blood, or the pulmonary arterioles may be occluded. There may be sudden death." The symptoms, as given by Dr. R. H. Gary, Murfreesboro, N. C., are: "Dyspnea, syncope, pain in the parts, sometimes convulsions, and coma."

**Tolerance for Morphine.**—Some interesting cases are reported. Dr. F. F. Attix, Lewiston, Mont., says that he has seen fiends eat and inject 60 grains daily. Another physician says that some of his female patients cannot take it without being nauseated and having headache, diarrhea and vomiting. Others speak of wakefulness, nervousness and excitement following its use. Another speaks of the use of a dram in twenty-four hours; still another of 54 grains daily, in two doses. Another says that he has had patients in whom 1-grain doses were without effect, while in others 1-4 grain produced alarming symptoms.

**Normal Salt Solution.**—Nearly all "fell down" on this. While for convenience we may speak of it as meaning a solution

containing about a dram of table salt to the pint of water, this is technically far from correct. The term "normal" is really a chemical one, used in volumetric analysis. A normal solution contains in every liter of water as many grams of the salt as its molecular weight. For instance, the molecular weight of sodium chloride is approximately 58.5. To make a normal solution of sodium chloride we should therefore dissolve (if possible) 58.5 grams of salt in 1000 Cc. of water. A decinormal solution is one-tenth as strong, i. e., it contains 5.85 grams of salt to the 1000 Cc.—this being approximately 0.6 percent. It so happens that this is not far from the concentration of the blood, so it is taken as a fair standard of strength, just for convenience.

**Cumulative Effects.**—An interesting comment on this question is by Dr. I. W. Mustard, of Toledo, Ohio: A case of renal congestion seen at noon; no urine voided in some thirty hours; went after it with a catheter, but didn't find any; diagnosis, suppression of urine with acute uremia; breath of urinous smell; slight delirium. I gave a maximum dose of fluid extract of jaborandi, waiting twenty minutes for flushing of face and diaphoresis; no results. Kept on waiting ten minutes more, wondering why I got no results; went to the druggist and asked him to open up a fresh bottle of Squibb's tincture, and hurried back and gave one dram—and watched for results. In half an hour decided to try some other way. Got some hypodermic tablets of pilocarpine hydrochloride, 1-20 grain, and injected one tablet—bound to fight it out on this line, if I had to use the whole tube of tablets. In twenty minutes diaphoresis began and there was a flood of urinous perspiration that soaked and stained the bed clothing. The result was out of all proportion to the dose.

"I reasoned it out thus: No elimination, saturation of blood and tissues with urea, etc., therefore no absorption; two maximum doses from the stomach in half hour, but no action. Small dose of alkaloid in the tissues started elimination and was followed by absorption of the heroic doses

of fluid extract and tincture. Results were satisfactory; patient up in the evening."

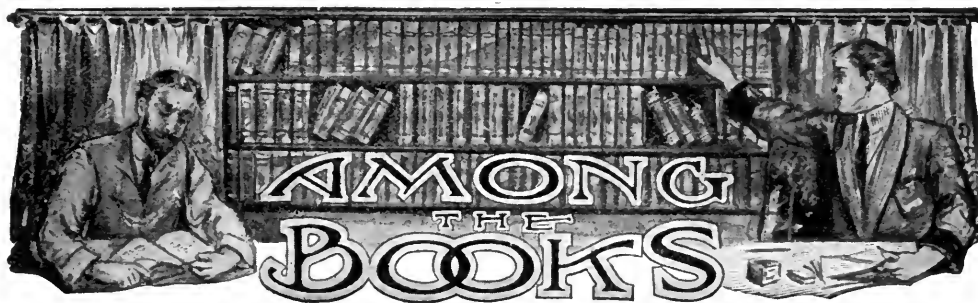
**Vaginal Douches: Are they Reactive or Nonreactive?**—Most of the answers to this question were that they are reactive, while others answered that such douches could be either reactive or non-reactive, the latter answer being correct. It all depends on how they are given. Douches given at a temperature of from 110° to 125°F. and prolonged from twenty to thirty minutes' time are distinctly nonreactive. Such a douche given for a period of less than fifteen minutes is more or less reactive and is distinctly so if given for five minutes' time or less.

### EXAMINATION QUESTIONS

1. Discuss the different conditions that cause variation in dosage.
2. What conditions of the body tend to cause variations in the action of medicine? What may be the effects of environment in relation to dosage?
3. What do you mean by synergistic remedies? What by antagonistic ones? Give examples of each.
4. How do drugs taken by the mouth get into the general circulation?
5. Why should the alimentary canal be thoroughly cleaned out before attempting any special medication?
6. Discuss the duration of the action of drugs, giving illustrative examples.
7. What do you understand by active-principle therapy? Give advantages of active-principles.
8. Do you believe that acute diseases can be aborted or cut short by appropriate treatment, and if so, how?
9. What conditions contraindicate the use of reactive applications?
10. Describe the effects of short applications and very hot and very cold water.

### RESEARCH QUESTIONS

1. Give us your opinion concerning "idiosyncrasy." In how large a degree do you think the term a cover for insufficient knowledge?
2. Give some examples of synergistic and antagonistic action not noted in the text, preferably as observed by yourself.
3. How would you employ hydrotherapy in typhoid fever? Give the technic, also the physiologic action aimed at.
4. Name five remedies which act very quickly, telling their degree of solubility, when evidences of their action first appear and how long they last. Do the same for five remedies which act slowly.
5. Do you believe that you have ever aborted or cut short a case of pneumonia, the diagnosis being beyond question? Typhoid fever? How did you treat your cases, giving method very briefly?



### CROFTAN'S "CLINICAL THERAPEUTICS"

Clinical Therapeutics. By Alfred C. Croftan, A. M., M. D. Second edition, revised. Chicago: Cleveland Press. 1907. Price \$5.00.

Just a year ago this month we had the pleasure of reviewing the first edition of this excellent work, and we had it then in our heart to hail its advent as auguring well for a healthful resurrection of therapeutics from the deadly numbness of medical nihilism. While Croftan is thoroughly versed in the German school of therapeutics yet he endorses the recent words of Von Leyden: "The day of nihilism in clinics and of pessimism in practice are conquered and lie far behind us. Internal medicine stands to-day under the sign of therapeutics." We have pleasure, indeed, in seeing this book favorably received by the medical profession of this country. Of the mechanical perfection of the book we must repeat our praise. The reader who has not purchased the book as yet we request to refer to the February CLINIC of 1907, p. 255, where he will find a more extended notice of the work.

### STEPHENS'S "MEDICAL GYNECOLOGY"

The Essentials of Medical Gynecology. By A. F. Stephens, M. D. Published by The Scudder Brothers Co., Cincinnati. 1907. Price \$3.00.

The book is written exclusively from an eclectic medical point of view, which the unsectarian physician must never neglect. The first chapter gives a list of the remedies used in this work and their eclectic or

"specific" indications. The second chapter gives an enumeration of conditions and symptoms and the eclectic remedies for their relief. These two chapters will give the non-eclectic physician a pretty good idea of eclectic treatment. The book contains 416 pages of 5 1-2 x 8 1-2 inches, and an index of 12 pages. The illustrations are generally good, though some of them are rather grotesque. The language of the book is very simple and direct. The author touches sufficiently upon diseases that are of the latest discovery. It is a useful book for the general practitioner.

### GILBERT'S "URIC ACID AND ITS CONGENERS"

A Textbook on Uric Acid and its Congeners, with Special Reference to its Physical and Chemical Properties; its Metabolism and Accumulation in the Organism, together with the Disease Processes arising therefrom and their Etiological Therapy. By Geo. A. Gilbert, M. D. The Danbury Medical Printing Company, Danbury, Conn., 1907. Price \$3.00.

The great value of this monograph is the résumé, historical and contemporary, of what was and is said of uric acid and its congeners and its use and dangers for the human system. He shows Haig's mistakes on this subject, but also his undeniably great merits. We might say a word or two about the author's forcing the idea of "evolutionary development" into the subject, but time and space forbid. The author is widely read on this subject. In therapy he gives nothing new in addition to what an intelli-

gent physician of modern times, especially an alkalometric physician, knows and practices. This is not a demerit, but on the contrary, it belongs to the merit of "hold fast to that which is good."

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#### HARE'S "PRACTICAL DIAGNOSIS"

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Practical Diagnosis. The Use of Symptoms and Physical Signs in the Diagnosis of Disease. By Hobart Amory Hare, M. D., B. Sc., of Jefferson Medical College of Philadelphia. Sixth edition, revised and enlarged. With 203 engravings and 16 plates. Lea Bros. & Co., Philadelphia and New York. 1907. Price \$4.50.

Professor Hare's plan of teaching diagnosis is from observing abnormal phenomena in the various parts and organs of the body. This necessitates to allude comparingly to their normal appearances in health. In this way he treats in the successive twenty-three chapters of the face and head, the hands and arms, the feet and legs, hemiplegia, the tongue, mouth, pharynx and esophagus, the skin, the thorax and its viscera, the pulse and blood-vessels, the abdomen and its viscera, the bowels and feces, the bladder and the urine, the blood, the eye, chills, fever and subnormal temperatures, headache and vertigo, coma and unconsciousness, convulsions or general spasms, hiccough, vomiting, regurgitation and the character of the vomit, cough and expectoration, pain, tendon reflexes and muscle-tone, speech. This plan appeals to the better reason in teaching and learning.

The style of the book is that of the lecture room and bedside teaching and is far more attractive than the essayistic style. A book in its sixth edition and by a teacher like Hare needs no commendation or laudation on our part.

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#### ROBSON'S "THE PANCREAS"

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The Pancreas, its Surgery and Pathology. By A. W. Mayo Robson, D. Sc., F. R. C. S., and P. J. Cammidge, M. B., D. P. H., Illustrated. Philadelphia: W. B. Saunders Company. 1907. Price \$5.00

Our knowledge of the normal pancreas is more complete compared with our knowledge of its abnormal conditions and its relation to its own diseases and other diseases of the body and its juices. On all these the fine book before us gives an amount of interesting information of which it behooves the educated physician to be at least not ignorant. The mechanical equipment and illustrations of the book are exceptionally fine.

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#### CHURCH AND SALINGER'S "NERVOUS SYSTEM"

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Diseases of the Nervous System. Edited by Prof. Archibald Church of the Northwestern University Medical Department, Chicago, Ill. An authorized translation from the "Deutsche Klinik" under Dr. J. L. Salinger. 195 illustrations and 5 colored plates. Publishers, D. Appleton & Co., New York and London. 1908. Price \$7.00.

The wonderful amount of microscopic study done on the nervous system in recent years, both in quantity and quality, the results attained and more and more hoped for, the valuation of these for the diagnosis and treatment of diseases of the mind and body, and these and more yet implied is attempted to be put before the studious reader of this volume by a galaxy of scientific patient and self-sacrificing workers such as the world has never seen before. The book comprises 1160 pages of 6 x 9 inches, with indexes of authors and of subjects. No single human being during a full term of life could have performed the work recorded in this volume. We enjoy in this book the labors of generations of teachers. Wonderful!

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#### SCOTT'S "SEXUAL INSTINCT"

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The Sexual Instinct: Its Use and Dangers as Affecting Hereditary and Moral Essentials to the Welfare of the Individual and the Future of the Race. By James Foster Scott, M. D. Second edition, revised and enlarged. Publishers, E. B.

Treat & Company. New York. 1908. Price \$2.00.

The first edition of this book, in 1898, was very favorably received by the press and the profession. It is pleasant to record oneself on the side of a high morality such as this book defends. But during these ten years of interval between the two editions of this book a great many volumes on the subject have appeared, all advising humanity how to behave itself, but what the wicked expert in human and woman nature, Horace of old, said is regrettably true yet even in this twentieth century of grace, namely, "*Naturam expellas furca tamen usque recurrit*," which may be rendered somewhat colloquially as, "You may throw nature out with a pitch-fork, all the same she will come back again." Our advanced thinking, individualism, freedom, science, claimed morality, and all that, has not solved yet the sexual problem of life, but brought the ideal down in certain respectable quarters to a claim of homosexuality. Dr. Scott's book is highly recommendable to our educated fathers and mothers who are yet full of space-room for its wholesome information.

#### HOWELL'S "PHYSIOLOGY"

A Textbook of Physiology for Medical Students and Physicians. By William H. Howell, Ph. D., M. D., LL.D., of Johns Hopkins University, Baltimore. Second edition thoroughly revised. Published by W. B. Saunders Company, Philadelphia and London. 1907. Price \$4.00.

The merit of a good working physiology at the present time is not so much that it be exhaustive of the subject, for then it becomes unfit for the work of either medical student or practitioner. So much is now known of physiology that the amount of the unknown which our knowledge reveals is almost an unknown quantity. And the innate irrepressible hankering of the human mind has of late grown shy of theories, otherwise we might paraphrase the winged word of Goethe and say, "Where facts are not known a theory comes *apropos*." And yet we must know the physiology of health

in order to know the physiology of disease. And so the skill of a writer of a practical physiology consists in well knowing what to leave out of his book without detriment to the working knowledge of medical student and practitioner. And this merit may be safely accorded to this volume of Professor Howell, comprising the latest available and necessary knowledge of the facts and theories of physiology.

#### ANDERS'S "PRACTICE OF MEDICINE"

Practice of Medicine. By James M. Anders, M. D., Ph. D., LL.D., of the Medico-Chirurgical College, Philadelphia. Illustrated. Eighth edition, thoroughly revised. W. B. Saunders, Philadelphia. 1907. Price \$5.50.

This decidedly practical work has a very enviable record of some thirteen republications since its first edition in 1897, the author keeping up during that time with every advance made in medicine. The special recommendation this book deserves is for the differential diagnosis of diseases. Those that are unwilling to reduce all practice to the treatment of symptoms after the formula, "This is good for that, and that for this," will especially appreciate this work. This new edition has been brought fully up to date.

#### NEUSSER'S "DYSPNEA AND CYANOSIS"

Dyspnea and Cyanosis. One of the Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. Edmund von Neusser, M. D., of the Second Medical Clinic of Vienna, Austria. Translated by Prof. A. MacFarlane, of Albany Medical College. Published by E. B. Treat & Co., New York. 1907. Price \$1.50.

This is a delightful, small volume full of analytical scientific instructions on subjects which, though they may be quite familiar, it is yet, as the German would say, "*wohlthuend*" to hear a master discourse about. This volume is Part I, and if the coming parts will be as pleasantly instructive as this one is, the profession may anticipate a great

amount of comfortably imparted knowledge such as it has derived from Van Noorden's treatises on "Metabolism and Nutrition," published by the same house.

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#### STEVENS'S "PRACTICE OF MEDICINE"

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A Manual of the Practice of Medicine.—Prepared for Students by A. A. Stevens, A. M., M. D. Eighth edition, revised. Illustrated. W. B. Saunders Company, Philadelphia and London. 1907. Price \$2.50.

This manual has its place for the student and young practitioner in spite of any of the best large textbooks he may possess. At the bedside we must form by ourselves a succinct picture of the ailment or ailments we happen to have before us. And this is just what the manual does for us. Consulting this manual often the young practitioner will accustom himself to synthesize the phenomena he encounters at the bedside into an integral whole, a disease picture which he then will fight more intelligently and successfully.

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#### SALVARONA'S "THE NERVOUS SYSTEM OF JESUS"

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The Nervous System of Jesus. By Salvarona, Associate of the American Institute for Scientific Research of New York. Publisher: Henry J. Walters, Langhorne, Bucks County, Pennsylvania. Price 50 cents.

It has been the lot of this reviewer to write about books of very large dimensions, both square and cubical, and he came to the conclusion that there are books of the *multum in parvo* kind and also not a few of the *parvum in multis* kind. The book before us is of the first kind. Its object is to press upon the reader's mind that the miraculous healing instances of Jesus were not spiritual in the vulgar acceptance of the term, but natural, by the nerve-forces of the body of Jesus, *contra* therefore to Eddystic unscientific claim of the nonexistence of matter, whose attraction for some of the present shallow-thinking age is its pantheistic creed of the impersonality of God. The author

being naturally of an analytically constructive mind he goes off excursionally into regions of thoughts not easily followed by the reader. And on the other hand, there are in this book truly uplifting bouquets of thoughts and persiflages of pretending but false so-called "modern new thoughts." It is not a common book, for there is not a shallow line in it, and many a line needs an illuminating commentary.

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#### GREENE AND BROOKS'S "GENITO-URINARY ORGANS"

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Diseases of the Genitourinary Organs and Kidney. By Robert Holmes Greene, A. M., M. D., of Fordham University, N. Y., and Harlow Brooks, M. D., of University and Bellevue Hospital Medical School. With 292 Illustrations. W. B. Saunders Company, Philadelphia and London. 1907. Price \$5.00.

This very useful volume is the joint work of a surgeon and of a physician in actual practice and as such fairly represents the cases which a general practitioner is likely to meet in his experience. The equipment and illustrations are in the best style of these well-known publishers, and the price is very reasonable.

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#### EISENDRATH'S "CLINICAL ANATOMY"

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A Textbook of Clinical Anatomy for Students and Practitioners. By Daniel N. Eisendrath, A. B., M. D., of the University of Illinois. Second edition thoroughly revised. W. B. Saunders, Philadelphia and London. 1907. Price \$5.00.

This volume represents a vast amount of work by the author and others. That it is a most useful work need hardly be told to any physician whose conscience is not satisfied with superficialities and half-forgotten truths and which demands facts about the parts of the human body which the physician has at any time before him to treat. Much as we approve of this work, we hope that in a future edition the author will find it possible to incorporate also some physiology into this work.



#### PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## QUERIES

QUERY 5281.—“Exhibition of the Arsenates with Nuclein.”—C. A. B., New York, wishes to know what is the best time to take the triple arsenates with nuclein? The arsenates, he says, he would give after meals, but how does the process of digestion affect the nuclein?

The triple arsenates with nuclein should preferably be given after meals, this being necessary with all arsenical preparations. Theoretically, nuclein should always be given on an empty stomach, and we recommend, as you may be aware, that it be exhibited by being dropped under the tongue, absorption following from the buccal mucosa; yet, strangely enough, the triple arsenates with nuclein given after meals prove more efficacious than the triple arsenates without nuclein given in the same dose at the same time. We cannot explain it by any process of reasoning. It seems as though nuclein must be entirely destroyed by the digestive ferments, and when given alone with food or immediately after eating seems to exert little or no effect. On the other hand, we have repeatedly tried the two combinations, triple arsenates with nuclein, and without nuclein, and invariably prompt results follow the exhibition of the preparation containing nuclein. If you give the arsenates with nuclein before meals you are likely to set up anorexia and gastric irritation.

“What is the usual procedure in a case of dead fetus in the uterus? A woman, counting from the time ‘life was first felt,’ considered that she would be confined three weeks ago. But, counting from the time she menstruated last May, she would be confined in February. A week ago last Sunday the baby ‘thrashed around’ unusually lively and then became quiet. I was called in on the Wednesday following and could not detect signs of life. The cervix was tight. Again last Sunday I examined for signs of life but could not elicit any movement, or, after careful auscultation, detect fetal heart-sounds. There is no more discharge than usual from the uterus and the mother has no temperature and feels well. She does not like the idea of ‘carrying a dead child in her womb,’ that is all that troubles her. She says the child feels heavy. I am waiting for nature to take her course in the case and watching for signs of trouble such as septic infection or foul-smelling discharge from the uterus. Am I right?”

It is hardly safe to diagnose death of fetus at such a late stage of gestation (when other signs of trouble are absent) from cessation of movements and absence of heart-sounds. External auscultation may fail to detect cardiac action, and not infrequently when the child descends movement ceases. On the other hand, some women after experiencing—well on towards term—unusual fetal activity state that the child ceases to move and “feels heavy.” Later they give birth to a dead fetus. One woman, Hirst, says, had thirteen such deliveries. The end

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QUERY 5282.—“Signs of Fetal Death in Utero. When to Operate.”—C. A., New York, in a recent communication asks:

comes, as a rule, seven to ten days prior to expected accouchement.

The hand may be inserted and evidences of pulsation sought for in the cord or precordial region. Or the temperature of uterus and vagina may be compared; if they are equal, the fetus is dead, for the temperature of the child being higher than that of the mother, additional heat is imparted to the uterine cavity. (Cohnstein, Fehling.) It is well in all these cases also to examine the urine. Albuminuria appearing, where hitherto absent, would lead us to suspect death of fetus. When albumin has been present it may cease to present upon death of the child *in utero*. Were we in your place we should have a consultant, and if both of you feel sure of death, dilate and deliver. If there should be life you will probably save both child and mother by taking this course, whereas if you wait till evidences of putrefaction present to empty the uterus you may lose the woman! The method of forced delivery you are of course familiar with.

The child may be dead and the woman show no signs of being injured by its presence, for weeks; in some cases saponification occurs, in others mummification. The latter is more frequent when the fetus dies late in gestation. It may remain *in utero* for an indefinite time. The contiguity of the intestines however makes the invasion of bacteria very probable, and once putrefaction sets up, we have a serious condition to deal with. The later we empty the uterus the greater the danger. Edgar says, "the effect of the death of fetus upon the mother may practically be *nil*—unless germs in some way reach the body....Peptonuria occurs; the milk secretion appears; diminution of cervical temperature is noted; absence of pulsation in umbilical cord (hand introduced into uterus); Stolz's sign—a slight murmur or rustle due to changes in amniotic fluid—is said to present." (We never heard it!) The mother *may* become pallid, depressed, and suffer from anorexia and great distress in the abdomen.

It is evident that once convinced of the child's death it becomes the duty of the accoucheur to empty the uterus without

undue delay. Though mummification, calcification or saponification may occur and the woman suffer no ill effect, sooner or later trouble of some kind must arise, and, as pointed out, putrefaction is most likely.

In delivering, pay particular attention to cleanliness and avoid, if it be possible, laceration of the birth-canal. May we suggest that hyoscine-morphine compound would prove an ideal anesthetic in a case of this kind? If you will let us hear what the termination of this case is we shall appreciate the information.

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QUERY 5283:—"The Treatment of Sciatica." W. S. H., South Carolina, wants to know what is our method of treatment of sciatica. In this affection we have, first of all, to remove effete matter from the system. In every case we should give a preliminary "clean out"—a course of blue mass and soda, 1-2 grain, podophyllin, 1-12, half hourly for four to six doses at night; saline, one teaspoonful in a glass of water, next morning; then a rheumatic remedy, every four hours, as calcium and lithium carbonates between meals, with a glass of water, and, twice a week, epsom-salt sponge-baths. The application of guaiacol to the sciatic notch and along the affected nerve, following with compresses wrung out of a hot solution of epsom salt and covered with flannel is useful. A half-strength tablet, or two, of the hyoscine-morphine-cactin may certainly be given early to control intense pain.

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QUERY 5284.—"Some Unsatisfactory Experiences." H., Vermont, in a most interesting letter (the greater part of which is here reproduced) says: "Here are a few experiences which give me reason to believe that the alkaloids do not *always* act as they are said to:

"Experience No. 1.—Girl, four years old, had been sick only eight hours with a few minor symptoms; skin hot and dry, temperature 104° F., pulse 154, respiration 36. In a glass of 24 teaspoonfuls of water were dissolved 25 granules of amorphous aconitine, gr. 1-134, four of digitalin, gr.



1-67, 8 of veratrine, gr. 1-134. The mother, mislaying the written instructions, gave the child one teaspoonful of this mixture every fifteen minutes until it was all used. Skin still hot and dry, temperature 104° F., pulse 158, respiration 35. After waiting two hours to see whether this mixture would act, but finding no change in the patient, I gave four grains of Tully's powder. Within thirty minutes perspiration began and continued until temperature and pulse were normal.

"Experience No. 2.—Twin sister of the above girl, taken sick the next day with the same train of symptoms. Temperature 103° F., pulse 148, respiration 35. Into 24 teaspoonfuls of water were put 1 tablet of aconitine, gr. 1-200, and 2 tablets of digitalin, gr. 1-100 (both Squibb's make). One teaspoonful was given every fifteen minutes. After three doses perspiration began and continued, without further medication, until temperature and pulse were normal.

"You may say, I should have 'cleaned out' with calomel and a saline laxative, in the first case. Still you allow no such remark to escape you in your criticisms when galenicals fail to act. However, the calomel and saline laxative had been given. In my experience almost invariably it takes from ten to twenty times as much of one make aconitine as it does of another's to get the same effect. If aconitine *is* aconitine, why this difference?

"Experience No. 3.—Secundipara, in labor four hours. Pains strong and at 4-minute intervals; os the size of a silver quarter, rigid. I gave one granule of caulophyllin, gr. 1-6, every fifteen minutes, for two hours. During this time the pains increased in severity and frequency and the os became very wiry and did not further dilate. The pains caused the woman intense suffering, so I gave morphine sulphate, gr. 1-4, hypodermically. The woman was soon easier and labor advanced to termination, slowly but more satisfactorily, both to the woman and to the doctor.

"Experience No. 4.—Postpartum eclampsia. First convulsion at 8 o'clock. Beginning at 8:20, 15 granules of veratrine,

gr. 1-134, were given hypodermically every fifteen minutes until 10:15, with no lowering or softening of the pulse nor lessening of the severity of convulsions. At 10:30 o'clock 8 minims of Norwood's tincture of veratrum viride were given hypodermically. Improvement began very soon, and 6 more minims were given at 11:15, after which there was only one slight convulsion, and that at 12:30, when 5 minims more were administered. Recovery uneventful.

"Experience No. 5.—Female, age 20 years. Diagnosis, typhoid, after five days of preliminary symptoms. Temperature 102° F., pulse, 114, respiration 22. This patient was kept on the sulphocarbolates, 5 to 10 grains every two hours, with calomel and saline laxative every other day, for ten days. During this time the temperature was above 102° F. only once, pulse above 100 only four times, and both gradually approaching normal. On the 23rd day, temperature 99° F., pulse 90, when, without warning, the temperature shot up and the abdomen became distended with gas. On the 24th, the temperature was 104° F., and there were great quantities of flatus; sulphocarbolates were increased, calomel and saline laxative were used freely, and this was continued for three days, with symptoms growing worse. On Oct. 28 the sulphocarbolates were omitted and acetozone given freely. Oct. 29 temperature was 103° F., next day, 102.5° F., then 100° F., and on Nov. 1 it was down to 98.8° F. Flatus had wholly disappeared. Convalescence uneventful.

"I still believe in and use alkaloids, but I also use other remedies when the alkaloids fail to work."

We have read with interest the record of these very unusual cases. Taken as a whole they fairly illustrate the important truth that no set of remedies is going to reduce the practice of medicine to a level plane, but that idiosyncrasy, exceptional cases and occurrences may be confidently expected to appear. Moreover, that granting the uniformity of effect of a set of remedies as to the quality and quantity of their action, there still remains the uncertain feature of the reaction of the patient to

them. Permit us to add (without making any personal reflection upon the writer) that there also remains the skill of the physician in adapting his remedies to the peculiarities of the cases presenting themselves.

In the first case the child showed a very remarkable resistance to the action of the remedies. You were on the ground and we were not, so that you are better able to judge as to why this should have occurred. In all of your cases it is quite impossible for you to say that the alkaloids first given had "no effect," and that all the results were due to the remedies administered afterward. These, possibly, simply added to the effect of the drugs previously exhibited and one is not warranted in attributing the whole of the benefit to the last doses given. The maximum daily dose (for an adult) of amorphous aconitine—such as we use—is nearly one grain. The maximum daily dose of the crystallized aconitine is 1-20 grain. We always recommend the amorphous, believing it to be safer and more uniform in action.

If the bowels—and stomach—had been properly cleared before beginning the antipyretic treatment (and aconitine *alone* in small dose might have proven best) we should assuredly have aided the latter by the external application of cool water, or even by a single dose of one of the coal-tar derivatives (which we use and recommend, as we do not practise an "exclusive system" of medicine). Neither do nor could we "guarantee" any remedies (no matter how active) to cure in all cases even when (seemingly) indicated. Our knowledge of the condition of patients in health and disease is not yet sufficiently comprehensive to enable us or any living man to do this. The intelligent use, however, of the active principles does enable the practitioner of today to control pathological processes as they never were controlled heretofore.

In your third case you used caulophyllin during the first stage of labor. It is rather a remedy for the false pains, so called, which precede true labor. That the labor-pains increased in severity was to be expected, that morphine gave the patient relief is

one of the elementary observations of clinical medicine. Your case simply shows that caulophyllin, in the doses in which you used it, would not stop the increasing severity of the pains, and we are uncertain as to why you should have expected that it would do so?

Your case of eclampsia is indeed a remarkable one. It is the only report of the kind we have ever received and shows a resistance to the action of veratrine which, in our experience, is unparalleled. Here, also, the comparatively small doses of veratrum evidently gave relief because they were added to the preceding doses of veratrine.

Remember that, after all, it is "*dose enough*" which counts!

Your typhoid case is a very simple one and easily understood. You merely cleared out the alimentary canal by "rule of thumb," that is, by giving so much medicine, but failed to comprehend that the process was not a completed one, and, as a consequence of your neglect, the fecal matter retained in the bowel decomposed and caused tympanites! If you will refer to any article we have published on the subject of typhoid fever in journal or book form, you will find an urgent recommendation to use oil of turpentine in this emergency. Recently we have repeatedly called attention to this matter and detailed the experiences of physicians who, under such conditions, administered enemata of plain kerosene. The result in every case fully demonstrated the correctness of our diagnosis—removing the cause by bringing away an enormous mass of feces! The patient at once proceeded to recovery. Your patient made a very narrow escape, and you are to be congratulated that perforation did not take place.

The case is a good illustration of good remedies wrongly applied. The sulphocarbolates should have been used during those five days of preliminary symptoms before you made your diagnosis—that was the time for the sulphocarbolates (following the "clean out") to get in their best work. After this period had passed you could only moderate the course of the disease. That the use of acetozone was followed by

such quick improvement is an interesting observation, and shows, possibly, a use for acetozone which no previous writer has mentioned—so far as our own observation goes. We shall remember this item and would suggest to our readers the propriety of trying acetozone should a similar unfortunate condition present in their cases. Prompt and proper treatment obviates such a necessity as a general rule.

We suggest, Doctor, that you report this observation in one of the journals in your own State, that your colleagues may "try out" this remedy and see how far your deductions are applicable. The action of the active principles when in a state of chemical purity is absolutely certain and uniform for a given dose. The reaction of the system of the patient is another matter. Under the old system we have two uncertainties, that of the remedy and that of the patient. With the active principles we have but one, and that one certainly looms up ominously in your list of cases.

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 QUERY 5285.—"Agrimony."—O. G., Indiana, writes: "In your journal for February (p. 160) you speak of agrimony (or Dr. Thomas Musgrove of Washington, D. C., speaks highly of it) as a remedy in asthma. Please tell me where to get it and the dose of this drug."

We judge that you can obtain agrimony at any ordinary drugstore, taking of course the chances as to quality. As this drug is very little used you will probably receive a specimen which has lain in the drugstore since the civil war and from which all activity has long since departed. Possibly by sending to some of the more responsible manufacturers of fluid extracts you can obtain a reasonably active specimen.

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 QUERY 5286.—"Retention of the Membranes."—O. Mc. L., Indiana, writes us in regard to a young woman, married four years, who became pregnant in October last, about the 20th, and miscarried December 24. The fetus came away as did all the membranes, but there has been a dark-brown, dirty discharge ever since with occa-

sional small clots of black blood. "I have given her all the best tonics I can get, and as it still flows I decided to ask someone who I knew could tell me what to do. I hope you may be able to outline a successful treatment for me. The lady is up and doing her housework, suffers no pain, but the discharge is annoying to her."

You will have to curet, irrigate, and perhaps pack the uterus. For technic see any good work upon obstetrics or diseases of women. It is quite evident that you failed to remove all the membranes from the uterine cavity. Let us suggest that you operate under the most strict aseptic conditions. We do not know whether you are familiar with the remarkable efficacy of Dr. Sourwine's uterine curet and irrigator. With this instrument it is easy to thoroughly dilate, cleanse and irrigate the uterus at one operation, the whole technic, being remarkably simple. If you will write Dr. Sourwine at Brazil, Ind., he will be pleased to send you descriptive literature. Do not lose any time, Doctor, in cleansing out this uterus or you may have ugly complications. Internally give the woman echinacea, one granule, and eupurpurin, two, every three hours and hourly of calcium sulphide, 1-6 grain. Apply to the os wool tampons saturated with equal parts of carbenzol and fluid petrolatum, removing every twelve or twenty-four hours.

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 QUERY 5287.—"Pruritus Hiemalis, Prairie Itch, or What?"—R. W. S., Ohio, has written us relative to a peculiar skin disease which affects people in his locality. We described pruritus hiemalis and ventured the opinion that the disease was of pruritic character due to retention of waste and inactivity of the skin. To this the doctor replies:

"Your letter does not quite explain my cases. As to pruritus hiemalis, my textbooks do not refer to it. Let me explain further: There is very little eruption, if any; 'itch' is the complaint and scratch they do with might and main. Seems to attack whole families. I have cases that have lasted four or five years. When they scratch and bring the blood it seems to relieve that

location for a while. It affects men, women and children. The temperature, tongue and pulse are normal. In several families where a member had eczema he would not get this complaint. It is queer you have not been deluged with letters about this trouble. It seems to appear only under the clothes. The patients bathe frequently and are good, clean, sober well-to-do people. No doctor in this neighborhood seems to know what to do for it and as 50 or 75 persons have it in this township alone and all have had it continuously for from six months to five years its nature ought to be discovered. It is most severe on buttocks and chest, and itches more when warm or clothes are off. Attacks only when protected by clothes. Scratching until blood comes relieves that spot. I can find no eruption save scabs due to scratching. It attacks all members of families. None have been cured. Some have had it since I came into this neighborhood, five years ago. They try other doctors and they (like me) do not know even the diagnosis. Open up your spacious brainpan, doctor, and help us."

If you will refer to Von Harlengen, page 345 ("Pruritus"), you will find described the form of pruritus hiemalis mentioned by us. It is first observed (in adults as a rule) when the first frosts appear and lasts throughout the winter. In summer it leaves or else we may then have a marked aggravation—summer pruritus. The disease is a "functional cutaneous affection manifesting itself solely by the sensation of itching without definite structural alteration of the skin". Scratching of course causes scabs, excoriations and secondary infection.

"It is worse when the patient removes his clothing at night and when warm in bed." "That portion of the body covered by clothing suffers most." The extremities, buttocks, chest and upper back are badly affected frequently. "The disease may persist." The pruritus caused by *lice* is easily distinguished. Scabies may be detected by making a careful observation of the parts; the burrows or the acarus can be found (on hands usually) with any good glass. Eczema oozes somewhat and somewhere and there

is distinct change in the skin. Pruritus appears to be caused by diseases of the nervous system, hepatic disease, gastrointestinal and genitourinary disorders, etc.

Von Harlengen's remarks apply to your cases. "The first and main symptom is itching"—sometimes the patient described it as though a piece of rough flannel were being touched to the skin; others say it is like the crawling of insects. In others tingling is spoken of. The itching is intermittent but worse at night; it rarely invades the whole body though occasionally region after region may be attacked. In most cases it occurs in certain localities."

If we have, then, "a disease of the skin without any primary sign of alteration of its structure with the subjective symptom of itching" we have a "pruritus". The cause necessarily must be looked for. We are inclined to think that insufficient elimination is to blame here. If you will look into the matter carefully you will discover the *causa causans*, without a doubt. Local peculiarities should be noted; a particular kind of underwear, a peculiar variety of food, some (local) personal habit may give you the key. Examine the urine of two or three cases and look up the daily menu, also find out the quantity of food ingested and amount of waste voided by the rectum. Do not forget to examine the *soap* these people use.

If you will read Von Harlengen (4th edition), Jackson and Stelwagon we feel sure you will have no further difficulty in recognizing the disorder. Were there a vegetable or animal parasite, with lesion, we should not have "pruritus" merely. Give each patient blue mass and soda, gr. 1-2; iridin, gr. 1-6; podophyllin, gr. 1-67, hourly for six doses at night and saline laxative the next morning on awakening. Order a hot epsom-salt or sodium-bicarbonate sponge-bath thrice weekly, and after the bath rub in phenol-camphor. Boldine, one granule, xanthoxilin, stillingin, three, between meals, and arsenic sulphide, one granule after food, for one week with arsenic bromide for another week in place of the latter, will prove effective, we think. You may have to push the sulphocarbolates to effect first

and in stubborn cases give pilocarpine for a few days.

Be sure to keep the bowel empty and kidneys active—*also the skin*. We have many times described various types of "prairie itch" and asked our readers to carefully note their cases and report. There is no questioning the fact that a peculiar form of pruritus exists which is not described in the textbooks.

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QUERY 5288.—"Effect of the Arsenates upon the Bowel."—W. H. H., Illinois, asks whether there is anything in the arsenates of iron, quinine and strychnine, or plain strychnine arsenate that would affect the bowels, i. e., loosen them.

It is hardly probable that they would "affect the bowels" one way or another to any great extent, especially in the usual doses. Of course strychnine has a tonic action and might exert a beneficial effect in diarrhea; on the other hand, the arsenates in extra full doses *might* set up slightly increased intestinal secretion, but, practically, strychnine arsenate and the combination of arsenates may be looked upon as not directly affecting intestinal action. The arsenates should, however, always be given after food so as to prevent gastric irritation. By relieving enervation and improving tone of the mucosa the arsenates would in time cause normal intestinal activity and in this way might be said to "act on the bowels."

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QUERY 5289.—"Flatulence and Nausea of Pregnancy."—R. A. B., Iowa, has a patient three months pregnant, who is troubled with excessive flatulence and severe burning in stomach. The woman is nauseated but does not vomit much; cannot eat on account of distress and burning. "I have cleaned her out," he says, "and am keeping it up as necessary. Am giving two tablets every two hours of the sulphocarboles, and strychnine, gr. 1-30, three times a day. Patient says she would feel well if she could only get relief from the terrible gas and stomach burn. Will you kindly advise me at once?"

The less medicine we give to pregnant women the better, and in this case you will probably find the entire symptoms to disappear after a couple of day's abstinence from solid food, and giving two or three enemata of decinormal salt solution. We might also suggest that this lady wear an abdominal supporter. Gradually increased pressure from the rising uterus is apt to cause all these disorders. If medication is necessary you will find one of the digestive (No. 3) tablets, before meals, papayotin, charcoal and soda (one or two tablets) after food efficacious, unless the patient suffers from gastric ulcer. You do not give us a clear enough clinical picture to enable us to decide upon this point, but our experience leads us to discount the gastric troubles complained of in early pregnancy. Cerium oxalate, bismuth subnitrate, and cocaine promptly control the nausea of pregnancy. Our method of curing vomiting of pregnant women has been given in these columns quite recently. It is effective.

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QUERY 5290.—"Late Tertiary Manifestations."—J. H., California, asks advice in the following case: "Patient, a gentleman about 56 years old, robust, good constitution, had syphilis when about 25 years old, of which he says he was "quickly cured." General health excellent, is married, father of four robust children, does not drink nor smoke, no excesses whatever. About 15 years ago he had on the calf of his left leg something like a ringworm which disappeared and then reappeared on the calf of his right leg; disappearing from here again, it broke out years afterward on his left forearm near the elbow joint on the ulnar side. It never gave him any trouble, but he listened to a quack doctor who gave him some dirty-looking salve in which there was sulphur and which had been used before by somebody else. This salve produced hard, large scabs which the patient burned himself with pure carbolic acid. Since that time large and small sores have appeared near the condyloid process of the elbow which I judge to be gummata of tertiary syphilis. They disappeared all at once unnoticed but

were followed by cutaneous eruptions with pus which, when broken, disclosed irregular-shaped deep cavities with serrated walls and angry-looking fundus. Some healed up under my treatment only to reappear again some little distance away, one even showing up on the inner side of the upper arm not far from the elbow articulation, but which after discharging some gummy stuff healed up to stay healed, but those of the forearm persist in cropping out with the peculiar characteristics, the serrated, deep borders, some of the size of a dime and larger. Some of these, after healing up, contain very dark blood, while the skin peels off in layers all around them. My treatment consisted of an antisiphilitic formula with local applications of mercurial and iodoform ointments, carbenzol, echafolta, iodoform ointment, etc., but without much success so far."

This is evidently a case of delayed tertiary syphilis. We doubt very much whether the application of the "quack's" ointment had any definite influence upon the course of the case. While all syphilis is "relapsing syphilis" there is a type in which the tertiary symptoms break out fifteen, twenty or even thirty years after a supposed quick cure, and as a matter of fact a case of mild early syphilis is liable to prove disastrous in later life, the patient declining to stay under treatment at the most vital period. You are aware of course that the circinate syphilide often appears upon the lower third of the leg, and the only question we have is whether you may not have a mixed infection, tubercular syphilide at the elbow. It seems to us that the scrapings or discharges from the lesions should be examined microscopically. Put this patient upon potassium iodide, 2 grains t. i. d., and some good mercurial antisiphilitic formula, every four hours, adding echinacea, one granule, and stillingin, one; nuclein, 10 drops morning and night, hypodermically if possible, if not, give under the tongue. After ten days substitute for the potassium iodide, calx iodata, 1 grain, returning to the potassium iodide in ten days, and so alternate. Cleanse the sore with peroxide of hydrogen, dry, swab with pure oil of turpentine (Merck) and dress with

gauze saturated with thuja and echinacea, one part each to two of water. Continue the oil of turpentine until granulations are plentiful and clean, then dress with euophen gauze and euophen. We think you will have no further trouble with these lesions. Let us know the results of treatment and continue the specific medication for at least one year.

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QUERY 5291.—"Curare in Epilepsy."—F. W. P., Missouri, says: "I am thinking of using curare in a case of epilepsy of long standing and desire your opinion. Have you ever used it and with what results? Also, can you supply curare and would you advise me as to how much to use? I wish to use it subcutaneously. Do you think it should be used alone?"

Let us urge you before using this drug to study carefully the reprint of Dr. Candler's article on epilepsy; his treatment has proven successful in a great many cases. Curare is a very dangerous drug and is only useful in a certain type of epileptic cases. It is rather difficult to procure a good preparation and the patient has to be very carefully watched and the dose gradually increased to effect. Curare contains different alkaloids, that formerly obtainable containing curarine. The curare now on the market contains not only the proper alkaloid tubocurarine, but also the glucoside curarin, which latter has an entirely different action. The chief effect of curare is to paralyze the nerve-terminals supplying striated muscles. It paralyzes very readily the nerve-terminals in all muscular tissue except of the heart. The nerves of the short muscles of the toes, ear and eye are first affected, then those supplying the limbs, head and neck, finally the muscles of respiration. Curare has been used in cases of tetanus, hydrophobia, etc., but the danger accompanying the exhibition of the drug is very great, and as we can control epilepsy by more rational methods it seems hardly worth while to run the risk of using this potent and little-understood poison. Solanine and verbenin are better remedies. The dose of tubocurarine is given as 1-12 of a grain once or twice daily to effect.



**HEART DEPRESSANTS.**—A heart depressant may be the best sustainer of the heart.—Konkle, *New York Medical Journal*.

**CACTUS IN THE AGED.**—Ellingwood's *Therapeutist* calls attention to the excellent action of cactus on the heart of the aged.

**IN THE DECCAN.**—The *Fortnightly* of January 10 has another of R. G. Eccles' interesting articles. This one is descriptive of his tour in the Deccan.

**MENOPAUSE.**—The nervous symptoms of the menopause with feeble nutrition are relieved by anemonin.—Burke, *Milwaukee Medical Journal*.

**GREATEST PERIOD OF DANGER.**—To the patient the greatest period of danger from ether is after the age of fifty years. Arnold, *Northwestern Lancet*.

**GLONOLIN.**—My confidence is undiminished in the combination of amyl nitrite and glonoin for alarming heart failure.—Satterthwaite, *Virginia Medical Semi-Monthly*.

**ECLAMPSIA.**—I have never seen a woman have convulsions after her pulse had been reduced to 60 by veratrum viride.—Allen, *Atlanta Journal Record of Medicine*.

**NEW IDEAS.**—It usually requires considerable training to enable us to receive new ideas properly; failing thus we retard the progress of medical thought.—White, *B. M. J.*

**GREATEST ANESTHETIC.**—In *Albright's Practitioner* E. C. Conklin pronounces the H-M-C compound the greatest of anesthetics, one that is proving a boon to suffering humanity.

**COMMENTING** upon the announcement of cement coffins, guaranteed to be water-proof, as now on the market, *The Critique* pertinently asks, who in Hades wants a water-proof coffin!

**SALE OF THE BRIEF.**—*The Medical Brief* announces the sale of that journal to Henry R. Strong and the retirement of Dr. Lawrence as editor, publisher and proprietor.

**BEST EVER!**—We have heard several readers of *Altruria* remark that the last number is the best yet that Dr. Robinson has issued. Look it up. Always something in it worth while.

**CACTUS.**—In atrophy of the heart, cactus or convallaria does better than does digitalis; while any routine stimulation is bad practice in dilatation or hypertrophy.—Blair, *Medical Council*.

**EXTREMES.**—It seems almost a law that we should rush to extremes of thought, so that having been for years wrong in one direction we travel for years wrongly in another.—White, *B. M. J.*

**STRYCHINNE OR CAMPHOR?**—In England we give strychnine when the pulse is feeble, in Germany camphor. This seems absurd; one or the other must be the better.—White, *B. M. Jour.*

**STROPHANTHIN.**—This glucoside is in my experience reliable, and in doses of 1-200 to 1-100 grain soon relieves dyspnea and precordial distress.—Satterthwaite, *Virginia Medical Semi-Monthly*.

**WHEN** a pulmonary hemorrhage is active, atropine is one of our very best remedies. It should, however, be given in large doses, from 1-20 to 1-60 grain.—Hennell *Eclectic Medical Journal*.

**BOWMAN** says that iris is an ideal drug in those cases of sick headache brought on by sedentary habits.—*American Practitioner and News*. Try iridin, a tablet every hour until the bowels begin to move.

**CHRONIC RHEUMATISM.**—In *Therapeutic Medicine*, for November, W. C. Abbott contributes a brief paper upon the treatment of "Chronic Rheumatism," which contains a number of very valuable hints.

**TYPHOID FEVER IN CHILDREN.**—In the treatment of this disease I have derived most satisfaction from combining salines with antiseptics, such as the sulphocarbolates.—Barbour, in *American Practitioner & News*.

**A TEXAS MONSTROSITY.**—The *Texas State Journal of Medicine* has an interesting illustrated report of a monstrosity. This is not the new Texas State medical law, but a bicephalous production of Palm, Green Co.

**PHAGOCYTOSIS.**—The importance of phagocytosis is confirmed rather than weakened by the researches that led to the opsonins, and the therapeutic value of nuclein still stands as the best-established fact of these investigations.—Abbott, *Carolina Medical Journal*.

**TETANUS.**—Henry reports four cases treated by introspinal injections of magnesium sulphate. One recovered, all were relieved. Alarming cerebral and respiratory depression followed. Cumulation was noted in two cases.

**BACTERIA VS. PATIENT.**—For the last forty years we have tried so conscientiously and scientifically to help the patient by following up his bacteria, that we ran past the patient himself altogether.—Morris, *American Journal of Obstetrics*.

**MAGNESIUM SULPHATE.**—Meltzer finds that when a fatal dose of magnesium sulphate has been given to a rabbit, death may be prevented by the intermuscular injection of theobromine, enough to cause free diuresis.—*American Medicine*.

**THERAPEUTIC Awakening.**—The patient began to manifest his preference for being unscientifically well, instead of scientifically dead; and then came the therapeutic awakening.—R. W. Wilcox, *The Monthly Cyclopaedia of Practical Medicine*.

**SEE A GOOD THING?**—Robert T. Morris quotes a Standard Oil man as saying that one of the most important things in this world is to know a good thing when we see it. Next thing we will hear that Morris has seen the hyoscine-morphine anesthetic.

**THE "ITALIAN HAND" OF THE SURGEON.**—Carstens says that a good surgeon needs a very fine Italian hand. In order to make a good and nimble surgeon the hand should be developed from the earliest youth.—*American Journal of Obstetrics*.

**THIOSINAMIN.**—Boliker says that thiosinamin four hours after administration produces marked leucocytosis, the leucocytes abounding in the scar tissue and acting on the connective tissue like phagocytes.—*Candian Journal of Medicine & Surgery*.

**EVER HAPPEN TO YOU?**—Say, Bro. Editors, did this unfortunate experience ever occur to you, that you find something in one of your exchanges so good that you read it clear through to the end, to find then that it is a quotation from your own journal?

**A MEAN TRADE.**—A New York minister in a tirade against the doctors stated that the medical profession of today was not a profession, but a trade. If so it is a mighty mean trade, since the average annual income of the American physician is only eight hundred dollars.

**WE TOO?**—The introduction of anesthesia was prejudicial to its discoverers. Wells committed suicide, Jackson died in an insane asylum, and Morton worried himself to the grave.—Arnold, *Northwestern Lancet*. The discoverers of the H-M-C will not be added to this gruesome list.

**A DANISH DOCTOR** says that weeping sets in motion a host of harmful bacilli which render the neighborhood of the weeping one especially harmful. Physicians especially should bear this in

mind. In fact all husbands should, when the wife takes the weeping process of securing new hats. The safest thing is to run at once.

**AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION.**—The eleventh annual meeting of this Association will be held in Chicago, June 1 and 2, 1908. An excellent program has been prepared. Einhorn, Cannon, Hemmeter, Mendel, Benedict, Friedenwald, and all the rest, will be present.

**THE CHICAGO CLINIC.**—We have quoted *The Chicago Clinic* till we are actually ashamed to quote any more, and nevertheless we must call your attention to the patent, duplex, back-action, reversible, adjustable, universally applicable section on "Treatment," on page 478, December number.

**"A MEDICAL CAREER."**—Dr. Casey A. Wood's beautiful address entitled: "A Medical Career and Intellectual Life," has been reprinted from the *Bulletin of the American Academy of Medicine*. It will well repay you to send to the author at Chicago, Illinois, for a copy of this finished production.

**INTESTINAL TOXEMIA AND OLD AGE.**—Metchnikoff places intestinal autointoxication in the foremost rank of the causes producing premature old age and death, with syphilis next in importance. Alcohol and the gout-rheumatism group of disorders he lays far less stress on.—*Boston Medical and Surgical Journal*

**SEVERAL GOOD OPENINGS.**—We know of several splendid locations for young doctors, practising alkaloidal therapeutics. There are two in Illinois, one in Iowa and one in Kansas. Also one in Turkey-in-Asia, to "fill in" while the doctor, a missionary, takes his vacation. Write us if you are interested, enclosing stamps

**OBSTETRIC ANESTHESIA.**—In *The Clinique*, for September, H. O. Skinner, of St. Paul, contributes an excellent article upon hyoscine in obstetric anesthesia. His conclusion after a careful study of the matter is, the method of narcosis has many advantages, and its disadvantages may be overcome by care on the part of the physician.

**REVENGE!**—In an apparently mad desire for vengeance on those manufacturers who refused to submit to their dictation, the men in charge of the A. M. A. organization at Chicago are even trying to make it appear that the drugs from which the products of the recusant manufacturers are made, are themselves without merit.—*National Druggist*.

**PILOCARPINE ADULTERATIONS.**—*The National Druggist* tells us that pilocarpine is being adulterated with sulfonal; as both are soluble in alcohol, this is not detected when pilocarpine is used in hair washes. The sulfonal is not soluble in water, and the adulteration was detected by a physician who was trying to make a hypodermic solution of pilocarpine.

**MEDICAL COLLEGE CLQUES.**—How much longer is the rank and file of the medical profession going



to submit to have laws made for them and be ruled by the medical college clique? How long before the country practitioner will wake up and realize that these cliques are working him for a good thing?—Gordon G. Burdick, *Wisconsin Medical Recorder*.

**AFTER THE BRAIN STORM.**—Through the courtesy of Dr. Edwin Leonard, Jr., of Reed and Carnrick, we have received a beautiful framed picture of "The Brain Storm" representing a little girl who has just finished up an attack on the "innards" of her Teddy bear, smashing dolly's dishes and general demoralization of the doll's wardrobe and furniture generally. It's a striking thing.

**THE ELDERLY BLADDER.**—In *The Southern Clinic* for December there is a paper by Dr. Waugh upon "The Elderly Bladder." Anybody who is interested in that sort of a thing may possibly find the article of some interest to them. If they don't, there is plenty more in Dr. Bryce's energetic and independent little journal to repay one for the small trouble of sending for a sample copy.

**TO THE OKLAHOMA READERS OF CLINICAL MEDICINE.**—Will some doctor in Oklahoma send me the present address or whereabouts of Henry Hoffman, who lost an arm near Red Lands, Cherokee Nation, I. T., in the fall of 1889. He is still in Oklahoma some place and some of the medical brethren will no doubt be able to give me his address.—T. H. Humphries, M. D., Kissee Mills, Mo.

**YOHIMBINE.**—Daels concludes from experiments made on animals that yohimbine simply increases the menstrual flow in females, without any effect of stimulating the sexual function or appetite. In some instances, however, an increase in sexuality has been noted, associated sometimes with serious psychic disturbances. These must be regarded as evidences of a toxic action, and guarded against in the dosage.—*Dietetic and Hygienic Gazette*.

**SPARTEINE.**—Convallaria has had its day. It has proved unreliable after extended experience. But sparteine has come into favor; though not so powerful a diuretic as digitalis, it is more prompt. I have used it satisfactorily both in heart failure and in cardiac dropsy. It may be necessary to give 1-2 grain before the diuretic effect is obtained, but it is not cumulative and I have never seen any ill effects from it.—Satterthwaite, *Virginia Medical Semi-Monthly*.

**HASHISH AND INSANITY.**—Some years ago a party treated the morphine habit by making hashish eaters out of the victims. In the meantime we note in *The American Druggist* that out of five thousand two hundred and sixty-four cases of insanity treated in the Cairo Asylum, 27 percent were attributed to the excessive use of hashish. The party in question claimed that it had never been demonstrated that hashish, or cannabis indica, used habitually, did any harm; and in this way excused himself for shirking his duty to his patients, leaving them in the grasp of a worse habit than that from which he pretended to cure them.

**TAZIN** reports 243 operations in which he injected scopolamine and morphine an hour before beginning the use of chloroform for anesthesia. He had never observed the slightest accident. In a general way he found the anesthesia more satisfactory than with chloroform alone, and especially valuable in impressible patients, in whom the injection calmed the apprehension of fear. In big doses he thought scopolamine action upon the heart dangerous.—*Surgery, Gynecology & Obstetrics*.

**ALL SECTS IN ONE!**—It appears that a medical college out west has announced that it teaches the regular therapeutics, the eclectic and the homeopathic. Those who founded the college appear to have labored under the hallucination that they would thus win the support of three distinct sets of friends, namely the regular, the eclectic and the homeopathic. Instead of that they have just exactly three disgruntled parties to jump on them; and apparently at last accounts all three are jumping on and using the hobnails in their boots with good effect.

**COWARDICE.**—Better the few jealous professional shrugs and, "Yes, he's all right, but," than a slave in a mental cell where nothing is allowed to come forth except through the sieve of harmful tradition shaken by those whose backbones are pithless willows. It is this cowardice on the part of the profession, this fear of being accused of advertising, that wrings millions of dollars from the ignorant and poor people to enrich the poisoners of babies, the corrupters of girls and the destroyers of adolescent development.—W. L. Howard, *Critic & Guide*.

**ACTION OF ANTISEPTICS.**—*The New York State Journal of Medicine* in editorially commenting upon the failure of a number of antiseptic remedies, in destroying microorganisms, makes the ordinary mistake of assuming that this is the only useful function of such a preparation. It is becoming more and more evident that the destruction of microorganisms is not the only or even the chief function of such remedies. The unquestionable benefit following their application is to be explained on other grounds.

**ANESTHETICS.**—In a paper on anesthetics, in *The International Journal of Surgery*, G. W. Thompson uses the following significant words: "There are physicians who claim they have given chloroform and ether a hundred times without a single fatality, and if their methods were adopted by others such accidents would not occur. I would reply to this by warning you, not to be deceived. There are few things in medical literature that are more tiresome than these false claims and clamorous outcries of conceit and vanity."

**SOLANDRINE.**—*The Chemist and Druggist* says that solandrine is a new alkaloid obtained from solandrum leaves. It belongs to the atropine group, resembling hyoscyne, but differing from it chemically in some respects. The profession is just beginning to comprehend that hyoscyne is not identical in physiologic action with atropine and the other mydriatics. It seems almost certain that a study of the various alkaloids of this group will

reveal differences in them which will correspond to different indications met in practice. We hope the time will not be long in coming when these groups of medicines will be studied relatively, and the different indications for their use will be made out. Then we shall begin to have something like science in drug therapeutics. Then we can particularize instead of generalizing in our application of these valuable medicaments.

**ETHER AND CHLOROFORM DANGERS.**—Klatt revives Dawbarn's sequestration anemia as a means of obviating the dangerous effects of ether and chloroform, by withdrawing some blood from the general circulation, by constriction of the extremities before the induction of anesthesia. We are glad to see that some progress is being made in diminishing the dangerous effects of these old-fashioned anesthetics, so long as some men will continue to use them, and refuse to adopt the new and better methods.

**MEDICAL SUPERSTITIONS.**—In *The Bulletin of the American Academy of Medicine* for December, Dr. Roland G. Curtin, of Philadelphia, contributes a very interesting and scholarly paper on "The Medical Superstitions of Precious Stones, Including Notes on the Therapeutics of Other Stones." As the article is more than fifty pages long we cannot reproduce it, but must content ourselves by calling the attention of those who may be interested, to it. It was read before the American Academy of Medicine, at Atlantic City.

**CASTELLANI** reported excellent results in the treatment of elephantiasis by the hypodermic injection of fibrolysin (Merck's preparation of thiosinamin), combined with the use of rubber bandages in cases where the skin was verrucose. If the skin was smooth the rubber bandage was not advocated. In one case the patient, who had suffered for twelve years, received 62 injections, at the end of which the circumference of the ankle had been reduced from 23 1-2 inches to 9 inches, the calf from 25 1-2 inches to 12 inches.—*Canada Lancet*.

**SOURCES OF THE ALKALOIDS.**—Of two varieties of *Datura fastuosa* examined by Smith, one proved to contain 22-100 percent of scopolamine, and 34-1000 percent of hyoscyamine; while the other contained 2-10 percent of scopolamine and 23-1000 percent of hyoscyamine. An important economic feature of the active-principle movement is that many plants may now be utilized as sources of supplies, which are at present neglected, they not being in the Pharmacopeia. The entire plants can also be used, instead of that portion which has previously been official, for the extraction of the alkaloids.

**ELIMINATION IN EPILEPSY.**—In *The Virginia Medical Semi-Monthly* J. Allison Hodges contributes a valuable paper on "The Value of Elimination in the Treatment of Certain Forms of Epilepsy."<sup>1</sup> He says that "while we all admit in a general way that the regulation of the *prima via* is one of the essential basal principles of all well-ordered therapeutics, in the treatment of epilepsy, do we fully appreciate its real value and efficiency?" He is constrained to say that not until recent years

did he thoroughly appreciate this fact and had its full therapeutic value firmly forced upon him. The old aphorism, "clean out, clean up and keep clean," had been relegated to surgical systems for too long. This maxim was of greater if not equal importance to the physician, and especially to him who treated epilepsy.

**DR. BARNHILL RETIRES.**—We note with regret that Dr. J. U. Barnhill is about to retire from the editorship of *The Columbus Medical Journal*. During the nine years of his editorship Dr. Barnhill has given the profession a good journal, strictly ethical, independent, straightforward, useful; in fact under his editorship it has been distinctively a journal which did credit to the profession of his state. There are many medical journals which could have been better spared than this one. We trust that Dr. Barnhill is not going to leave off the use of his pen, but that in some way or through some other medium he may still reach the profession.

**EXCUSE US FOR AN HOUR.**—The December number of *The Chicago Clinic* has just come in. Here is a specimen from the first editorial: "We aim to rid medicine of the humor of deadly seriousness, which has in years past come over us like the atmosphere of the morgue; to demonstrate as we may, that scientific works need not be dry, that professional expression need not be cumbersome and entirely void of literary style. We specialize, if you will, in sunshine and fresh air for doctors, and the doctor himself is our chief and most interesting theme." We must stop, however, we don't want to reproduce the whole of this number.

**INTESTINAL TRACT AND LUNGS.**—Goedel made some interesting observations upon the intestinal tract, in diseases of the lungs. The microorganisms he believes to penetrate to the lungs by way of the blood channels. If this occurs after abdominal operation, what is there to prevent its occurring during so-called health, when, by the stoppage of fecal masses in the intestines, the microbic colonies therein contained thus acquire an undue degree of virulence, and accumulate a store of toxins to overcome the natural resistance of the body. Undoubtedly you and I are looked upon as cranks on the subject of intestinal toxemia, and we are content.

**MORPHINE IN FECAL INFECTION.**—Speaking of fecal infection, Mayten in *The Northwestern Lancet* says that "hypodermic injections of morphine, to keep the bowels quiet for a few days, are the best means to relieve this condition, as the bowels will often move without purges after this." It depends a good deal upon the dose. Small doses of morphine, very small ones, quiet inhibition, just as very small doses of atropine do; but larger ones paralyze peristalsis. If at the same time they paralyze any spasmodic conditions, it may be that the fecal mass by the simple force of gravity may pass more easily through the relaxed bowel. But we would not like to depend upon morphine here. Atropine and hyoscyamine, on the contrary, have won worldwide repute in such cases. A full dose of atropine with a similar dose of physostigmine, aided by colonic flushing, forms a line of treatment that affords more certainly satisfactory results.



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## NIHILISM AND THE USE OF DRUGS

Some pointed and pertinent sayings upon the use of medicines of a great American physician, with just a few words of friendly criticism

**B**EFORE the Medical Society of New York, Abraham Jacobi delivered an address with the above title. The reader will find it published in *The New York State Journal of Medicine* for February. Had we the space we should publish this address in full, but must content ourselves with the following notes from it:

"The question as to the value of drugs in the treatment of the sick has been recently answered contradictorily by flippant arrogance and by men of honorable ambition and great genius." Founded on the French school of pathology, the Vienna school of medicine was established seventy years ago by Rokitansky, who claimed that pathological anatomy was the essence and sum total of medicine, and Skoda, who cared for the physical diagnosis of an organic anomaly but not for the patient. It was all care, but no cure was seriously tried. In Vienna the ideal patient was he who was satisfied with being auscultated and percussed by Skoda and autopsied by Rokitansky.

The callously scientific atmosphere of Vienna spread far and wide. Dietl in 1851 said: "Our practical work does not compare with the amount of our knowledge. Our ancestors laid much stress upon their success in the treatment of the sick, we on

the results of our investigations. Our tendency is purely scientific. The physician should be judged by the extent of his knowledge and not by the extent of his cures. So long as there are successful physicians, so long are there no scientific physicians. Our power is in knowledge, not in deeds.

Under the influence of this icy atmosphere Oliver Wendell Holmes made his outbreak, which has since been repeated and reechoed far and wide. Holmes was not a pharmacologist or a practitioner of medicine. Many have repeated the quotation, believing they thus ranked with Holmes by imitating the grave mistakes of his scurrilous and sarcastic mood, and with Astley Cooper, who is quoted by Holmes on account of his remark that more harm than good is done by medication. "If he be correct, the only and the simple thing to be done by me and by you is to omit the harm and do all the good we can, and are expected to do, by medication and otherwise." However, Holmes also expressed himself as follows: "It is not of the slightest interest to the patient to know whether three or three and a quarter cubic inches of his lungs are hepatized. He wants something to relieve his pain, to mitigate his anguish or dyspnea or bring back motion and sensibility to the dead limb."

Dr. Jacobi then proceeds to discuss Osler's most recent outbreak, which led *The Evening Post* to say of it: "Here we have three trump cards placed squarely in the hands of the barefoot sunshine, barley-water and other cures, the new-thought health-givers, and the sufferers from various forms of religious mania." Dr. Jacobi says that what he read in Osler's crisp sentences was: "1. Be critical of the pharmacopeia as of everything else. 2. He is the best doctor who knows the worth and the worthlessness of medicine. 3. Study your fellow men and fellow women, and learn to serve them. Therapy means service," He adds, "I wish he had said that."

Dr. Jacobi goes on to say a good word for polypharmacy, objecting to the dictum that compound prescriptions are rarely desirable. He says: "The inexperienced and lazy should rather be admonished to learn how to find indications, and how to write a compound prescription when it is demanded, after his college has, like some others, neglected its duty to teach him. He should know the indications for the selections of drugs, as he is expected to know the rules for ordering diet, water, electricity, heat, cold and massage, aye, even the placebos of consolation and hope. Surely I prefer them to the prediction of an imminent fatal termination, according to the dictates of our aggressively brilliant Richard (Cabot) the Lion-hearted of a neighboring state. Unless the practitioner knows and does all that, he drives his patients to the manufacturer, the proprietary-medicine vendor, the Christian scientist and the rest of the quacks."

In the discussion of this topic he shows his own practical ignorance of precise medication. For instance he says: "There is no ground for the pedantic demand that two medicines with similar action should not be prescribed together. Even though all your pharmacists were of perfect knowledge and accuracy, on the shelves of the very best of them drugs are liable to lose their efficacy. That is why I recommend and frequently practise the combination of such drugs as digitalis, strophanthus and adonis,

or of the solid extract of digitalis and spar-teine sulphate or of caffeine." Here Dr. Jacobi is speaking from a galenic standpoint, the one with which he is familiar. If each of three heart tonics has deteriorated to an unknown degree, he mixes the three together, instead of selecting the one he wishes and giving it in unspoiled, accurate condition. Apparently he does not appreciate the difference in the indications between digitalis and strophanthus, adonis, spar-teine or caffeine. Those to whom the uses of the active principles have become familiar could hardly make such a mistake. His idea of the suggestion to give but one drug is that its advocates mean but one drug for a disease. The idea of giving a single drug to meet a single indication seems to have entirely escaped him. We may give any number of drugs at one time, if they can be so administered as not to interfere with each other, provided there is an indication present for each of the drugs given. We do not give five different drugs for malaria, but we may give five different drugs to meet five different indications occurring at the same time in the same case.

This illustrates what we have already called attention to, and that is, the difficulty of a physician occupying one plane of thought comprehending those who occupy another.

His next point is as to the fallacy of relying upon expectancy in such cases as offer a legitimate opportunity for efficacious intervention on the part of the physician. A ten months' baby showed evidences of spastic encephalitis. Two justly famous specialists suggested as treatment: "Let me see her again in six months." Jacobi says: "We stopped this expectant treatment. She was presented again after a regular iodide administration, and systematic bathing and passive movement and scientific massage—markedly improved within six weeks." "Expectant treatment! Verily, I tell you it is malpractice, which should be punished on account of neglecting what nature and sound therapeutics furnish. Expectant treatment is no treatment. It is a sin of omission

which not infrequently rises to the dignity of a crime."

His remarks on expectant treatment in advanced heart disease, in diphtheria and in rheumatism, are to the point. "How many cases of pneumonia have I saved in 54 years? You know I cannot tell, for I am not aware of how many would have got well without me. But when the feeble and arrhythmic pulse-beats rise in undue proportion to the number of respirations at an early date, you may feel sure the heart will give out before it is time for either crisis or lysis. Expectant treatment means neglect, and loses the game. These endangered hearts demand help. We are told often that no opiates must be given in pneumonia. Why not, when sleeplessness and exhaustion are threatened by an incessant cough? A single dose will provide a few hours' sleep that may save the life. In other cases drugs are positively life-saving, as in pneumonia of the second or third day with vast infiltration, cyanosis, beginning edema, dilatation of right auricle and ventricle far beyond the right margin of the sternum. With or without venesection you may save your patient by big doses of a drug. Nihilism or drugs; "you have your choice and your responsibility."

"Which, as a general rule, are the doses of medicine? Nothing is easier than to be misguided. Minimum and maximum doses are forced upon you in textbooks and pharmacopœias with refreshing coolness. Hundreds of times I have been called up by a druggist who informs me he has been told that the dose of sparteine is one-quarter of a grain. I replied, "That may be the dose of the man who is to be drugged with a placebo, but my patient requires his one-half or one-grain dose six or eight times a day. The average dose of fluid extract of digitalis is set down as one minim; those cases which require ten may get well with ten, but surely die with one."

"Dosage depends upon sex, age, body-weight, the stage of sickness or convalescence, high or low temperature, the condition of the absorbing tissues, the locality of application, the amount of blood circulating

in the vessels, the presence or absence of sepsis."

"Why is confidence in drugs so easily shaken?" Originally their effect was only known empirically. Digitalis had been removed from the pharmacopœia. Whithering restored it. The action of a drug, active or indifferent, is rarely amenable to such tests as of poisons at an autopsy. The effect of the drug as distinguished from that of the disease is difficult to make out. Still, many old drugs retain their place. Male fern has not lost its effect in two thousand years. "The large number of alkaloids renders drug treatment more positive and easier." The numerous cardiac and arterial stimulants, and the artery dilators which relieve the heart, the nitrites, iodides and aconite, have made us more sure of our footing and our patients more comfortable and safer. Antiseptics have rendered surgical antisepsis and asepsis possible, and the anesthetics cleared the air of the wails of millions of human beings. Old remedies have expanded their efficiency. Sero- and organotherapy have not fulfilled all expectations, because we expected too much. The German universities, Ehrlich's state institution, and the great manufacturers of all countries have contributed to increase our knowledge of drugs.

Dr. Jacobi personally looked over the register of a large New York drugstore. Of one hundred prescriptions of doctors in good standing, seventy contained nostrums from all countries.

He says, that during twenty years he has employed guaiacol in at least five thousand cases of tuberculosis. "What I am getting more sure of from year to year and have published repeatedly, is its reliability, no matter whether it is caused by its beneficent action on digestion, or what I believe to be its direct influence on a probable toxin formed by the tubercle bacillus."

In regard to the assertion that the older a doctor gets, the less medicine he will give, Dr. Jacobi suggests that some old doctors are becoming senile. "When you meet an old doctor who tells you he gives no drug, or a young one, who was born old, who uses

no cold water, no massage, on account of their alleged uselessness, he belongs to the class which remained in the rear, away from the battlefield of the army of explorers and fighters, or that unlucky class whose brain was first in falling victim to insidious atheromatosis. We are all human and subject to the laws of nature, which is indifferent to whether she preserves full manhood in one and makes an object of pity of the other. They say we are wonderfully and fearfully made. Some wonderfully and some fearfully.

"Nihilism is as conceited as it is impotent." In '76 Bartholow said: "He who despises his art can never become a great artist. Good practitioners are always found to be men entertaining the greatest confidence in the powers of medicine."

"Medicine is more than pure science; it is science in the service of mankind."

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You get more from your enemies than from your friends. The more they hate you the more they advertise you.  
—William Jennings Bryan

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### THE A. M. A. MEETING

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The next annual meeting of the American Medical Association will be held in Chicago, June 2 to 5. We hope that many readers of *CLINICAL MEDICINE* will be present. Chicago is the most available for a large meeting of this kind of any city in the country, and the attendance will undoubtedly be very large. In behalf of at least a part of the profession of Chicago we of "the editorial cabinet" want to bid all who may come a hearty welcome.

The arrangements which are being made for the entertainment of visiting physicians are, we understand, very elaborate. Not only will there be the meetings of the various sections of the Association and the opportunity to hear many valuable and entertaining papers by eminent medical men, but there will be side attractions in the way of clinics at all the hospitals, excursions in and about our city, musical and social entertainments, and many other things which should make this meeting a memorable one.

Chicago can not claim to be a very beautiful city, but it is the "nerve center" of the Continent and radiates energy and optimism to all corners, and it has its beauty-spots as well as its points of interest. Every visitor to Chicago is expected to visit the Stockyards, Marshall Field & Co.'s "biggest store in the world," and the University of Chicago. But quite as pleasant for most of us is a spin through the North-Shore parks and suburbs—and we shall try to arrange for the pleasure of our friends.

*CLINICAL MEDICINE* and The Abbott Alkaloidal Company will keep open house. We want to see as many of you as possible at our new laboratory. We are proud of it. Everything here will be wide open, as always, so that you can see just what we are doing and how we do it. A visit to Chicago without a visit to the "home of *THE CLINIC*" is something that no reader of *CLINICAL MEDICINE* can be guilty of, we are sure, and we want to assure you right now of a hearty Chicago welcome. Come early and stay late.

If we can be of any service to you, before you come or after you arrive—we are yours to command. If you would like for us to engage rooms for you at any hotel or make any arrangements for your comfort while you are here, let us know safely in advance and we will try to "fix things" to your satisfaction. If you desire hotel reservations, advise us how much you want to pay, whether you want a room with or without bath, and whether you wish to be near the meetings of the Association. Give us all the details and, if possible, we will do the rest.

Ravenswood is readily accessible from the central portion of the city. The easiest way to reach us is by the Northwestern Elevated. Trains may be taken anywhere on the Elevated Loop in the heart of the city. Anyone can direct you to it. Take the cars marked "Ravenswood," in large letters on the front of every train, and get off at Ravenswood station. We are out about seven miles from the heart of the city, a thirty-minutes' ride. From the Ravenswood station of the Elevated it is three blocks north to our laboratory.

We shall try to make it pleasant for our friends, and we shall feel hurt indeed if *you*, Doctor, come to Chicago and fail to pay us a visit. Bring your medical friends out with you, and bring your wife, of course. We want everyone to see what he have and what we are doing. We have no secrets from the medical profession.

Don't let us miss this opportunity for a better acquaintance. Come to Chicago and to Ravenswood!

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Learn from your mistakes, but don't cry over them.  
We best redeem the past by forgetting it.

—Elbert Hubbard

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## TROUBLES AND HOW TO TAKE THEM

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A stately ship was sailing over a summer sea, when suddenly a hurricane swooped down upon her. The captain saw it coming, turned pale, and called to the helmsman: "Hard up!" The mate yelled: "Hard down!" so imperatively that the helmsman obeyed him and not his superior officer. By so doing he threw the bows of the ship up into the wind, to face the approaching tempest, that is, the strongest part of the vessel. Had he obeyed the captain, he would have turned the weaker part, the stern, toward the approaching storm and ran before it.

This fairly illustrates two ways of taking trouble; one, bravely facing it; the other, running away from it. However fast we may run, the trouble is sure to follow and overtake us, and it is ten times worse from the fact of our having run from it. On the other hand, how often does it happen in our lives that when a threatened disaster looms over our heads, if we turn and bravely face it, the clouds dissipate, the storm subsides, and we find that after all there was not so much in it as we apprehended. Sometimes it is not a very great matter, but we hear of some physician—colleague, speaking ill of us. It is evident that something has disgruntled him. If we wish the trouble to grow and increase, we keep away from the man, and supply some tart comment on his asserted statements. The

trouble grows thereby and a definite rupture is the result.

Instead of this let us go frankly to our friend, place the case before him, and find out what he actually did say, which is never just what he had been charged with saying. Then see why he should have said anything to our discredit, whether we deserved it. May be not, but in any event when we have made amends for any wrong of which we were actually guilty, we are certain to find the other man disposed to meet us half way. The trouble has been reduced to its smallest proportions, and mutual friendship remains as a valuable asset, instead of a certain and bitter enmity which results from the other way of dealing.

The same thing holds good with difficulties of every nature. A brave, honest, straightforward course dissipates most of them; and those that do not subside before such facing are better met and contended with than if we had turned tail. All men hate a coward. Every man instinctively likes and admires courage. Courage is the almost necessary attendant upon innocence, and men know this; so that it prepossesses everybody in one's favor, that he had acted in the manner suggested.

Nevertheless, meeting difficulties with courage does not mean that you are to go about with a chip on your shoulder, ready to take offense and seeking quarrels, more than half way. The truest courage is often seen in ignoring attacks that are made. The most effective reply that can be made is generally silence. No matter how bitterly an enemy may assail your reputation, if you keep still, all sensible, fair-minded men are ready to say that you have your side of the question when it suits you to declare it; and the more venomous is the opposition to you, the more suspicious will they be of the motives of the man who gives utterance to it, and the less disposed to give credence to his attacks. Animosity blunts its own spear, as it is incompatible with the calm, judicial frame of mind which seeks to find the truth, the whole truth and nothing but the truth. These are old sayings and commonplace. Everyone of us knows their truth. Never-

theless it seems necessary that these old truths should be resaid constantly, in new words, in new ways, to keep us from forgetting them.

Trouble has a trick of coming  
 Butt end first;  
 Viewed approaching then you've seen it  
 At its worst.  
 Once surmounted straight it waxes  
 Ever small,  
 And it tapers till there's nothing  
 Left at all!  
 So, whene'er a difficulty  
 May impend,  
 Just remember you are facing  
 The butt end;  
 And that looking back upon it,  
 Like as not,  
 You will marvel at beholding  
 Just a dot!

The loudest cries of hard luck come from those who have destroyed their bodies with drink, their reputations with disgrace and their minds with want.

—Gilhooley

### LOCO WEEDS

The Department of Agriculture has issued an interesting bulletin giving the results of investigations of the loco weeds. It was found that horses, sheep and cattle were poisoned by the *aragallus Lamberti*, and horses alone by *astragalus mollissimus*. The symptoms described by stockmen were corroborated; being the lowered head, rough coat, slow, staggering gait, lack of muscular coordination, paresis, generally diseased nervous system, and in the latter stages of the disease, extreme emaciation. The principal pathologic changes were pronounced anemia, diseased stomach-walls, in acute cases congestion, in chronic cases ulcer. Locoed cattle generally have ulcers in the fourth stomach. There is an excess of fluid in the various cavities of the body, especially in the epidural space of the spinal canal. Here the effusion is organized into a gelatinous mass. In locoed females the ovaries are found diseased.

In regard to remedies: The weeds may be extirpated in fenced pastures, especially *astragalus* which appears in small patches. There seems no way of ridding the ranges of these weeds. Locoed cattle could generally be cured by strychnine, horses by arsenic.

The animals must not be allowed to eat the loco weed, they should be given nutritious food, and laxatives to correct the universal constipation. Magnesium sulphate may serve to some extent as an antidote. Immunity is not secured, the poisoning coming in a slow, cumulative manner.

The laboratory investigations made in connection with this subject resulted in the discovery that the inorganic constituents, especially barium, were responsible for the toxic action. There is a close analogy between the clinical symptoms and pathologic findings in barium poisoning, and those resulting from feeding to animals extracts of these plants. The sulphates, especially magnesium sulphate, form an insoluble barium sulphate and hence act as chemical antidotes. The loco plant proved harmless when grown on certain soils, which contain no barium. Also in drying certain loco plants the barium apparently was rendered insoluble in water, but could be extracted by digestion with the digestive ferments.

### CONVALLARIA: THE GOOD AND THE STALE

Lenneker reports his conclusions from a very extensive and successful experience with *convallaria* extending over five years. He employed this drug in all heart affections, excepting fatty degeneration. In the latter *convallaria* proved injurious. *Convallaria* is one of the remedies giving tone to the stomach, increasing appetite and exerting a tonic effect on the intestinal mucosa, increasing the action of the bowels in many. He quotes one case of cardiac disease, from the use of tobacco, in which digitalis had failed to give relief, although pushed. He prescribed *convallaria* and *nux vomica* with excellent effect. The use of the two remedies at once unfortunately vitiates his conclusions.

The principal obstacle to the study of all these succedanea to digitalis is the difficulty of getting the preparations in good quality. Digitalis is so much used by the medical profession that there is a constant replacing of the druggist's stock by new. The things



that are not so much used are likely to get stale, and if they are rarely called for, the druggist naturally will not take the same interest in renewing his stock and keeping it up to date; and so when anybody wants to experiment with these odd and unusual preparations he is not so likely to get a good one as he is if he uses digitalis. This gives him a decided preference for digitalis over all of the others and prevents an absolutely fair comparison of these agents.

Unfortunately, for this and for other causes the exact place of each of the various heart-tonics has never been established, and we still call all of them "heart-tonics" without making that nice differentiation between their effects which is necessary to make an absolutely scientific selection when we attempt to apply them in practice.

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He that abstains  
To help the rolling wheels of this great world,  
Glutting his idle sense, lives a lost life,  
Shameful and vain. Existing for himself,  
Self-concentrated, serving self alone,  
No part hath he in aught.

—Bhagavad-Gita

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## SUCCESS AND "THE SQUARE DEAL"

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How about the other fellow? While you are winning the patient, the money and the reputation, what is the effect upon the other man from whom you win these things? This question is less complicated in reality than it is in theory.

Theoretically, humanity divides over two great principles: One is the basal principle of all life, that which was so graphically depicted by Darwin, that which everyone of us grasps the meaning of at once, in the phrase, "the struggle for existence." According to this theory society is a vast circus, in which every man is armed against every other man, the struggle being carried on simply under certain rules, and the most successful man being he who can obtain the greatest advantage by coming as close as possible to these rules without actually breaking them in such a manner as to bring down retribution upon his head. This is the selfish principle embodied in the axiom

that a man should get and hold all he can. It is the law of the strong, disregarding the rights of the weak.

The other great principle which constantly combats this is the altruistic one. It is the rebellion against the hardness and cruelty, against the selfish principle, which has been preached to humanity by a constant succession of ethical religious teachers from the beginning of time. While Jesus was the greatest of these, and brought the altruistic principle to its greatest perfection, he was but one of a succession. Where could his system be more beautifully summed than in the dying words of Buddha, "Be kind to all that live."

Society is held together, and progress in civilization is ensured, by the balance between these two principles. If the selfish principle prevails, society falls to pieces and becomes nothing but a horde of lawless, ravening wild animals. If the altruistic principle is pushed too far, ambition fails and society is reduced to the condition of the Indians of Central America, colonized about their churches, where the priest did all the thinking for them, and the people were reduced to a set of lazy, worthless, unambitious weaklings.

Antagonism is certain. It is always present, and nevertheless in the last analysis there is no antagonism. For, as has been pointed out by Spencer and every great teacher of modern times, selfishness itself defeats its own object, unless altruism is in the ascendency. The prosperity of every man in the community is enhanced by the prosperity of every other man. When the demands of the trusts become exorbitant, the power of the people to purchase is so diminished that the trusts' profits fall. Men of the Rockefeller type are reversions; they are devolutional. Their success is illusory, since they lay the ax at the root of their own fortunes. On the other hand, men like Agassiz, who "have no time to make money," win thereby a greater success than could possibly have come to them if they had "taken time to make money."

In truth, the hustling which we advocate is of a different nature. How far any phy-

sician can claim an excellence which he doubtfully possesses, how far he is justified in doing this, depends upon the extent to which he can make good. If he confidently asserts his ability to manage a case, it is then up to him to go home and study and make himself proficient so that success will follow. Without this, boasting brings with it disaster instead of success. The increased proficiency which study, thought and experiment bring to one physician also does not do harm to his competitors, but on the contrary, good, for they also are thereby stimulated by necessity to go and do likewise. The result will be that not only the man who starts upon this process, but everyone within his circle of influence must do the same; and the entire professional tone of that community of physicians is thereby elevated.

There is nothing unhealthy, nothing greedy, there is nothing selfish in the effort of a physician to better himself and to let the world know it—if the latter be done in a proper manner, and not so as to shock the moral sentiment of his fellows.

Here, too, a caution is necessary: Beware of sticking too closely to last year's ruts. Society grows or dies, but never stands still. The rules and restrictions that were invoked last year do not fit the present time. Here and there some strong man refuses to be bound by restrictions which have been outgrown. His rebellion shocks the sentiment of his professional fellows for a while; but others follow this example, we grow accustomed to the change, and it is admitted as justifiable.

There are certain moral restrictions which no man must transgress. There are other restrictions which do not contain the moral element, and in this field opinion and practice must necessarily differ. This is debatable ground. It always will be; and personal judgment is to guide each individual as to the attitude to be taken toward these matters. For instance, there is nothing immoral or reprehensible in a physician putting out a sign, with his name, upon his office; yet in Paris the profession is not permitted to do this. There was a time

when in the eastern cities professional sentiment was outraged by the appearance of a larger sign than usual; whereas in some parts of the country a physician could undoubtedly cover the entire front of his house with red and white squares, if he chose to do so. Curiously enough, the loudest outcry against the physician is likely to come from some transgression of these nonmoral restrictions, while gross immorality, drunkenness, lying, false witness, may be wholly overlooked or winked at.

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The work you do, the words you speak  
 Have space on some eternal page  
 Whereon one time your eyes shall seek  
 To sum your profit or your wage.  
 Aye, he whose hands bear score and mark  
 Of toil's long stress, or battle scars,  
 Sends something out into the dark  
 As lasting as the time old stars.  
 —W. D. Nesbit

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### THE SLEEPING SICKNESS

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The sleeping sickness of Africa has been traced to infection by a parasite transmitted through the tsetse fly, in whose body the parasite passes a portion of its life cycle. But whence did the fly get the parasite?

We are now informed that it obtains its unwelcome guest from the crocodile, and it is proposed to put a stop to the disease by exterminating the crocodiles. This is not a very difficult matter—just make crocodile skins an attractive article of trade, and the thing will be done.

The fashion for alligator-skin valises, bags, and other articles threatened a short time ago to exterminate the alligator in the south; and had it continued this would have been the result, this animal having become very scarce indeed in many places where it was formerly plentiful. It is somewhat more difficult to obtain the crocodile from the rivers of Africa, nevertheless he would be obtained, and that certainly, as soon as an attractive price was placed upon his head.

But here is the difficulty: Admitting that the fly in question is nourished by the blood of the crocodile, it does not follow that the crocodile is the only animal capable of

affording sustenance to this fly, and that the fly will not, if the alligator is exterminated, succeed in obtaining enough nutrition from other sources to enable her to continue her baneful work. (For, like the mosquito, and most if not all the other pests with which mankind is pestered, it is the female whose insistence in providing for herself and her offspring occasions this misery to men.)

Whence does the mosquito obtain the plasmodium causing malaria? It is evident that a portion of the life history of this parasite remains yet to be unfolded. Who is the individual who will win undying fame, and confer a priceless boon upon humanity, by showing whence the mosquito gets the parasite? It is just as likely to be some obscure American doctor—obscure, that is, in the sense that fame has not yet thrown the limelight upon him—as it is to be any of the more eminent foreign big-wigs.

A writer in the *Indian Lancet*, of January 6, said that out of a population of three hundred thousand people in Uganda, Africa, two hundred thousand had died of this disease, and twenty thousand more were suffering at that time. It is proposed to segregate the sick and apply the atoxyl to these persons. To save the rest of the population is pronounced a simple matter. It is only necessary to remove the people two miles inland. The tsetse fly, which carries the disease, breeds within fifteen or twenty yards of the edge of the water, and will follow people some hundreds of yards or a mile or so, but beyond that the fly-free area is found.

An important part of the work of prevention is clearing all vegetation from the landing places, and water holes are to be similarly treated. This is an essential part of the scheme, as the flies can only live where there is thick bush, as shade is essential to their existence. The landing places should be cleared of bush to the extreme limit necessary to insure immunity, and the area so treated is to be planted with low-growing plants. Some difficulties will undoubtedly exist after these precautions; the disease

may be endemic, or continue to exist in a dormant state in animals.

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See that all the hours of the day are so full of interesting and healthful occupations that there is no chance for worry to stick its nose in.

—Luther H. Gulick

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### DIURETIC ACTION OF THE SULPHOCARBOLATES

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Some time ago Dr. A. H. Simonton called our attention to the diuretic action of the sulphocarbolates, which he asserted that he had noticed in his own case. In order to test the matter, we secured a sample of urine on Feb. 8, which was examined in our laboratory. Another sample from the same case was taken on Feb. 14, after the patient had taken four intestinal antiseptic (three sulphocarbolates) tablets every two hours, from 7 a. m. to 7 p. m. on the preceding day.

The laboratory report is as follows: First sample: Specific gravity, 1027; amount passed in twenty-four hours, 37 ozs.; total solids in twenty-four hours, 989 grs.; acidity, 75.7 percent.; urea in twenty-four hours, 21 Gm. (normal 33); uric acid, 1.8 Gm. (normal 0.6); sodium chloride, 18.6 Gm. (normal 10.15); chlorine, 11.2 Gm. (normal 7.8); phosphoric acid, 2.53 (normal 3.16); sulphuric acid, 2.53 (normal 2.01); albumin, indican and sugar absent; bile present.

The sample taken Feb. 14, after taking the intestinal antiseptic tablets, gave the following results: Amount in twenty-four hours, 98 ozs.; specific gravity, 1020; total solids, 2156 grs.; total acidity, 40.7 percent; total urea, 33 Gm.; total uric acid, 1.4 Gm.; total sodium chloride, 38 Gm.; total chlorine, 23 Gm.; total phosphoric acid, 3.82; total sulphuric acid, 5.58; albumin and sugar absent; bile and indican present.

This would indicate an enormous increase in the excretion of solids of the urine, and a still greater increase in the excretion of water. The presence of indican in the second sample is an anomaly. While the dose of the sulphocarbolates was larger than would be likely to be taken by any average person, it must be remembered that the sub-

ject here was unusually large, his weight being considerably in excess of two hundred pounds (274 lbs.). We will ask our readers if they have noted any similar effects from the sulphocarbolates. If so, we should be glad indeed to receive reports on the subject.

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To use what gifts I have as best I may,  
 To help some weaker brother where I can;  
 To be as blameless at the close of day  
 As when the duties of the day began.

To do without complaint what must be done,  
 To grant my rival all that may be just;  
 To win through kindness all that may be won,  
 To fight with knightly valor when I must.  
 —S. E. Kiser

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### SOUTHERN LANDS

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Does the man who invests in real-estate without examining it take chances? We are of the opinion that he does not, but that on the contrary he is sure to be "stuck." We have repeatedly called the attention of readers of this journal to the unused agricultural resources of the south. We have no reason to modify the views there expressed, as to the openings for capital and labor in that section of the country. But we are very far from saying that everybody who invests money in real estate in the south is bound to make a good thing out of it. If you do not know anything about farming, or about land, or about the southern climate, you had better keep out.

Here is a case that has just come to our notice: Some parties secured a lot of cheap land in the south. Now, there is any amount of cheap land that can be purchased down there, from three to ten dollars an acre; and one would think that such land, bought at such a price and sold for thirty dollars an acre, would afford a profit which would satisfy any reasonable man. But all men are not reasonable; consequently the parties in the deal to which we are referring, bought for about ten cents an acre a stretch of bare, desolate, sandy land. On one section of this they put up what they called a "model farm," to show what could be done. By the addition of fertilizers to the value of forty dollars an acre they succeeded in

winning very creditable crops. This would go on for five or six years, at the end of which time no amount of fertilizing would do any good, and the land had to lie fallow a number of years. But during the five years of cropping, opportunity was afforded to present an exceedingly attractive picture to inexperienced purchasers. On the basis of this, most alluring pamphlets were gotten out, and many persons were induced to buy this land at thirty dollars an acre. The consequences can be foreseen. Mechanics and professional men, who knew absolutely nothing of farming, were induced to sell out their little property and invest the savings of a lifetime in this land, which was absolutely certain to prove worthless. It did prove worthless, and after a few years' vain attempts to get a return for the money and labor invested, the land was practically deserted, the total investment being a loss except to the promoters, who certainly made a good thing out of it.

There is no limit to the opportunities for buying and cultivating southern land, but don't go blind; use your common sense, and if you don't know anything about these things find somebody who does, but who is not interested in selling worthless land at extortionate prices. The railroads are generally to be trusted, as it is to their interest to build up population and production in their territory.

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### A STUDY OF SOLANINE

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In *The Journal of Therapeutics and Dietetics* French calls in question the dosage of solanine. He quotes Waugh as stating that the first evidence of the full therapeutic action of solanine seems to be an "acid burning in the throat," which is followed if the dose is increased by oppression of the respiration. "These symptoms, therefore, should be taken as indications calling for either a reduction in quantity or frequency, or else the entire withdrawal of the drug."

Thrush, however, states that in administering this remedy for epilepsy, "in order to obtain satisfactory results the remedy must

be carried to its full constitutional effect, which is indicated by drowsiness or stupor, and then the dose may be reduced."

There is evidently here quite a diversity of views. As a general rule we advise that a remedy should be given until the first manifestations of toxic action are apparent, then the dose slightly reduced, believing that the full remedial effect of the drug is best obtained from doses just below those required to induce toxic action. It is becoming increasingly evident, however, that with many, if not all, drugs there is a decided antagonism between the effects of minute doses and those of maximum doses. According to Mays all drugs are probably stimulant in small doses and sedative in large doses.

Thus we have threefold dose-strengths from which to obtain the effects of a remedy, and it is a question not easy of solution as to which strength is preferable in any particular case. We have the stimulant effect from very minute doses, the full constitutional effect from the physiologic dose just below the toxic, and the sedative effect from the maximum dose, which may be stated as all that can be given to the patient without endangering his life.

Which of these dosages gives the best results in epilepsy? If medicine is ever reduced to a perfect science, we shall know beforehand the reply to this question. At present we are unable to give any other reply than that the physician must try for himself and find out. Thrush evidently looks for the sedative-dosage effect.

In the case of absorbent remedies, like the iodine compounds, it is easy to see that when we are desirous of obtaining the utmost beneficial action possible from the drug, it will come from a dose which is able to stimulate the absorbents to carry away morbid material and yet is not quite large enough to cause the destruction of healthy, normal tissue-cells. Here the physiologic dose, just below that which would give rise to toxic effects, is exactly the one which we try to obtain. This is further exemplified by the administration of mercury in the treatment of syphilis: we try to keep as close to the saliva-

tion-point as possible, without actually touching it, to secure the most permanent and rapid effect upon the disease.

But that this is a general rule, applicable to all medicines; it is another matter altogether. We may assume that it is, until experience has taught us better. It is a good general rule to go by in the administration of remedies; we holding ourselves ready at any time to modify this view when sufficient evidence has been adduced to justify us in doing so.

In this way we avoid the danger, which is by no means small, of losing the effect of a remedy by giving it in ineffective doses. Jacobi has recently shown that this applies to digitalis as a remedy in feeble conditions of the heart; and *The Critic and Guide* has recently described a case in which this venerable clinician saved the patient's life by increasing the dose of digitalis fluid extract from one minim to ten minims.

But the question of dosage, when we attempt to dose to effect, is decidedly difficult. It is a trifling matter if we simply read in our books that the "dose is so and so," and give it; leaving the patient to get better or worse, making no alteration in this dose unless some unpleasant symptoms tell us to lessen it. If in due time the desired results have not been demonstrated we usually drop that drug altogether and take up another one which promises better.

When the habit of dosing to effect has been formed, we begin with a minimum dose, one too small in any possibility to do harm, and by rapidly repeating the doses we soon ascertain how much our patient will stand, or how much is necessary to produce the effect we desire. This dose once established it is easy enough afterwards to arrange it for more convenient administration into three or four doses each day.

Solanine is too new a remedy in the treatment of epilepsy to permit any one of us to speak absolutely. Our impression is that it is best to begin with small doses and push them up until something happens, either until the beginning of toxic effects warns us to discontinue the dose, or until the effect upon the malady is such as we desire.

The few experiences of the writer have convinced him that the daily average dose for an epileptic is about one grain of this alkaloid. His opportunities for observations on the minute doses and the maximum doses have been too few to justify him in expressing an opinion. For these data we must look to the field. You gentlemen must not expect us to do everything.

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One of the most striking differences between a cat and a lie is that a cat has only nine lives.

—Mark Twain

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### ACTION AND PROPERTIES OF APO-MORPHINE

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In *The Medical Record* Fisk discusses the therapeutic value of apomorphine, reaching these conclusions:

"1. The effect is widely different when administered by the mouth than the hypodermatic effect.

"2. The average hypodermic dose is 1-10 of a grain.

"3. Given to children or debilitated subjects the possibility of depression should be remembered, and strychnine simultaneously administered.

"4. By the mouth it is useless as an emetic and of little value as a hypnotic, the effect being limited to its expectorant action. The average dult dose is 1-8 of a grain.

"5. It does not increase the effects of other narcotics.

"6. When used when there is an abundance of mucous secretion in the respiratory tract, it may flood the bronchial tubes and drown the patient in his own secretion.

"7. Always specify crystalline apomorphine hydrochloride. Morphine may be present if it is not thoroughly washed. Use the fresh preparation, but a greenish discoloration of tablet or solution does not necessarily contraindicate their use, if originally prepared from pure crystalline salts by a reliable drug firm."

To this we may add that the addition of a trace of hydrochloric acid completely removes the green discoloration. This is especially interesting in view of the pronounced opinion given by certain so-called medical authori-

ties, that under no circumstances should green apomorphine be employed. The verdict of those who have used this substance is unanimous, to the effect that no bad consequences follow the use of green apomorphine, nor is there any diminution or alteration in the therapeutic strength of the drug consequent upon the chemical change.

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### BERKELEY AND TAR-WATER

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Bishop Berkeley is known to fame as the author of the theory of the nonexistence of matter, that fine-spun cobweb of the brain, which has mused the *dilettante* thinkers of generations. Even Huxley took up and defended this theory, but we have always felt that he did so more as a joke than seriously, just as the experienced boxer may drop his arms and laughingly ask his pupils to hit him. Huxley, as the master dialectician of the age, had met and conquered every adversary with such consummate ease that he could afford to indulge in a like pleasantry.

Nevertheless, Berkeley was in another respect the most practical observer of his age. He was the first to recognize the immense possibilities underlying the action of antiseptics, although they were perhaps not known as such at the time. He advocated tar-water, as a universal remedy and preventive against disease; and now we know why he found tar water efficacious, and that his observations upon the question were not meretricious.

The idea was far in advance of his age, and it took the world of medicine many a weary year to develop sufficiently to realize the importance of his observations. As a general, local and intestinal antiseptic, there is no question but that the beneficial effects which he attributed to tar-water were real and not imaginary.

We have better antiseptics today, and many an illustrious name has since been associated with their application since Lister opened the eyes of the profession to the importance of this principle. We should not neglect to give credit to the great bishop, however, and the brilliancy of his observations may be used as a set-off, to the credit of the

clergy, as against the superstitions with which they have encumbered and continue to encumber the art of medicine, and their general indorsement of quackery.

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Rest is as important as work. Dreams must precede action. Concentrated art is not art, and the acquiring of facts is not growth.

—Luther H. Gulick

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### AN "EDITORIAL" BY RILEY

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In lieu of an editorial on a subject cognate to that discussed therein we submit a poem by James Whitcomb Riley. It tells a story and points a moral. We heard one of Chicago's bright men recite this poem at a club dinner the other night and it has been running through our heads ever since. It's great—because it fits!

#### MY PHILOSOFY

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I ain't, ner don't p'tend to be,  
Much posted on philosophy,  
But thar is times when, all alone,  
I work out idees of my own.  
And of these same thare is a few  
I'd like to jest refer to you—  
Pervidin' that you don't object  
To listen clos't and rickollect.

I allus argy that a man  
Who does about the best he can  
Is plenty good enough to suit  
This lower mundane institute—  
No matter ef his daily walk  
Is subject fer his neighbor's talk,  
And critic-minds of ev'ry whim  
Jest all git up and go fer him!

I knowed a feller onc't that had  
The yellor-janders mighty bad—  
And each and ev'ry friend he'd meet  
Would stop and give him some receet  
Fer cuorin' of 'em. But he'd say  
He kindo' thought they'd go away  
Without no medicin', and boast  
That he'd git well without one doste.

He kep' a-yellerin' on—and they  
Perdictin' that he'd die some day  
Before he knowed it. Tuk his bed,  
The feller did, and lost his head  
And wondered in his mind a spell—  
Then rallied, and, at last, got well;  
But ev'ry friend that said he'd die  
Went back on him eternally!

It's natchurl enough, I guess,  
When some gits more and some gits less,  
Fer them-uns on the slimmest side  
To claim it ain't a fare divide;

And I've knowed some to lay and wait,  
And git up soon and set up late,  
To ketch some feller they could hate  
Fer goin' at a faster gait.

The signs is bad when folks commence  
A-findin' fault with Providence,  
And balkin' 'cause the earth don't shake  
At ev'ry prancin' step they take.  
No man is grate tel he can see  
How less than little he would be  
Ef stripped to self, and stark and bare  
He hung his sign out anywhare.

My doctern is to lay aside  
Contentions, and be satisfied:  
Jest do your best, and praise er blame  
That follers that, counts jest the same.  
I've allus noticed grate success  
Is mixed with troubles, more er less,  
And it's the man who does the best  
That gits more kicks than all the rest.

### INJUSTICE AND HYPOCRISY

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During the last few months we have been made the object of a series of vicious attacks. At first they were relatively mild, but as these failed in their purpose to do us harm they continued to grow in length and intensity. At first couched in relatively courteous language they rapidly went down the scale to the author's level, completely unmasking the character of the man who wrote them. Shrewdly conceived, laboriously worked out, cleverly written, the evident fruit of months of toil, they show through and through that they are begotten in a hatred so intense that the author cannot be fair, and would not if he could. His later articles are full of abusive epithets, innuendoes and insults. Facts are distorted or withheld, to meet his purposes, as he may think necessary. There is not admitted, fairly and ungarbled, one word of our side of the story. To destroy—that is the undercurrent of the whole series.

These attacks, as we already know, have reacted and will continue to react upon their perpetrators. The American doctor, the great overwhelming majority of him, believes in the square deal; when controversy degenerates into persecution, when the motives underlying such attacks are open to question and the element of fairness is conspicuous by its absence, he is not blind, nor will he long be silent. We have abun-

dant evidence that such is the case. Not only have we received many letters from readers of *CLINICAL MEDICINE*, but many from others whose only interest in us is a friendly one; and with hardly an exception the writers speak kindly of us and our work and in condemnation of the spirit and substance of the criticism in which we have been assailed.

Shall we answer? Yes. But possibly not as our enemies expect and desire. In our own good time and in the way that then seems wisest we shall speak. We reiterate again what we have so often said before, that we are giving, shall give, every one the square deal—even this man, our insidiously working enemy—and we expect, from the real men of the profession, to get, and are getting, the same “square deal” for ourselves.

The mills of God grind slowly  
But they grind exceeding small.

Conscious of the desire to do only what is right, what is best for the doctor, what will help him most, we can afford to bide our time—and meanwhile we are going to keep right on working and growing—doing our level best.

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#### THE STINGAREE

Along the Gulf Coast that species of ray known as the stingaree has an evil reputation. Intelligent, educated gentlemen stated to the writer that they would rather be bitten by a rattlesnake than stung by a stingaree; that in the latter case the result was a longer or shorter period of distress, followed usually, some say invariably, by death within a year. In one case a man had been stung by a stingaree, and after a long period of suffering a large mass of the tissue around the wound sloughed out.

Wood, in “Our Living World,” speaks of this as a popular superstition, declaring that there is nothing whatever in the idea. But there are a good many things which scientists of this class don’t know. The possession of a poison-bag with ducts leading to the fangs or sting is not after all essential to the production of a toxic wound. Possibly

some unknown microorganism may inhabit this weapon of the ray and be transmitted by it to the wound.

It would be an interesting experiment for the bacteriologist to make cultures from the fresh sting. The latter is an ugly weapon when removed from the animal, a flat-pointed needle, with small sharp points on both edges. Whether poisoned or not, it can inflict an exceedingly ugly wound.

If any of our readers living along the sea coast have made observations on wounds made by this animal, we shall be glad to hear from them.

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On all occasions it is better to be a little more than tolerant, especially when a wiser and better man than ourselves thinks differently from us.

—Walter Savage Landor

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#### THE MEDICAL CURRICULUM

Dr. Beates may not have rendered himself very popular with the medical colleges, but he evidently knows how to take care of himself and maintain his position.

At the recent Pittsburg conference, reported in *The Bulletin of the American Academy of Medicine*, Dr. Beates gives some remarkable information as to the variability of the medical curricula presented by various medical colleges. For instance, obstetrics in one college requires 460 hours for its proper teaching, while another college manages to render its students proficient in 52 hours. General surgery in one college requires 2221 hours, while another college accomplishes the same task in 78 hours. In the same colleges general medicine occupies respectively over 1900 and 78 hours. Pathology in one school requires 646 hours, in another 48. Anatomy takes 1248 hours in one college, 126 in another. Physiology varies from 750 to 56 hours, the latter in no less a school than the University of Virginia. Chemistry varies from 756 to 78 hours; bacteriology from 660 to 30 hours. Dr. Beates denominates a number of the specialties as the “neoplasms on the body curriculum.” He finds neurology varying from 327 hours down to 10; dermatology and syphilis from 447 to 10; laryngorhinology 432 to 16 hours; genitouri-



nary work from 480 hours to 4; medical jurisprudence from 775 hours to none. These figures are exceedingly suggestive.

### HEMORRHAGE AND RICKETS

Wright showed that the alimentary canal of some persons seemed deficient in ability to absorb calcium salts. Therefore he advises calcium lactate given hypodermically for urgent cases of hemorrhage and in certain cases of rickets. He also has shown that probably the large calcium-content of cow's milk may cause abnormal tendency to coagulation, and in typhoid fever predispose to phlegmasia alba dolens. If any lesion of the endothelial lining of the vessel occur, the tendency may be diminished by moderate doses of citric acid.

It is further suggested that the calcium salts may be useful in certain cases of urticaria, especially in those who suffer from this malady after partaking of acid fruits, which contain oxalic or other vegetable acids. If there is already a deficiency of calcium salts, these acids dissolve and so remove from the body so much of them that urticaria and decreased coagulability of the blood results. The value of magnesium purges in urticaria probably lies in the fact that magnesium increases the coagulability of the blood.

### A HOMEOPATHIC DECALOG

A writer in the November, 1907, issue of *The Medical Advance* gives the following homeopathic decalog, in which some of us may possibly find something useful.

*One:* Thou shalt have no other therapeutic guide before these commandments. (Respectfully referred to Simmons.)

*Two:* Thou shalt seek for the totality of morbid symptoms. (What is the matter with that?)

*Three:* Thou shalt search diligently the symptoms of drugs and patients. (Is that homeopathy? If so, count us among them.)

*Four:* Thou shalt watch drug-symptoms with disease-symptoms to find the nearest

similium. (Leave out the last part in regard to similium, and it is all right.)

*Five:* Thou shalt give the single remedy. (That suits us.)

*Six:* Thou shalt give the minimum dose. ("The smallest possible dose to obtain the desired results" has been our motto for many years.)

*Seven:* Thou shalt learn to wait. (Well, we are waiting, patiently, until the medical profession catches up, which seems pretty hard for it to do.)

*Eight:* Thou shalt not alternate medicines. (We have always felt that if the medicine was chosen properly, one was enough. If it is not the right one, it is one too many.)

*Nine:* Thou shalt not unwisely repeat. (The repetition of doses depends on the speed with which they take effect.)

*Ten:* Thou shalt require obedience to hygienic law. (Well, there is not one of us, be he homeopathic, eclectic, regular, or anything else, who does not cheerfully subscribe to this.)

On the whole it is a pretty good decalog. If any of our readers disagrees with us, let us see if he can construct a better one.

Good luck is science not yet classified; just as the supernatural is the natural not yet understood.

### CACTUS

"The common idea is that cactus is *the* remedy for heart disease; and so it is if there is irritability of feebleness, the quick movement without strength. But its administration is not restricted to cases of heart disease. Given the quick movement without strength, it is the remedy in inflammation or functional disease. The influence of cactus seems to be wholly exerted on the sympathetic nervous system, and especially upon and through the cardiac substance. It does not seem to increase or depress innervation, is neither stimulant nor sedative, but rather influences a regular performance of functions. Its continued use improves the nutrition of the heart, thus permanently strengthening that organ. The direct indication for cactus is pain of a

constrictive character—as if the parts were bound with an iron band, whether it be in spasm of the heart-muscle or in menstrual nervous headache.”

The above paragraph is taken from Lloyd Brothers' "Dose-Book of Specific Medicine," just published by them. It is a fair illustration of the quiet, sensible, moderate tone used by Lloyd in speaking of the remedies which are put out by that firm. The "Dose-Book" we find exceedingly interesting. We would suggest to our readers that they will find in it many a useful hint to try in their practice. We presume that the "Dose-Book" would be sent to those requesting it of Lloyd Brothers, Cincinnati, Ohio. We make one more significant quotation: "Every jobber's stock in America is made up of fresh specific medicines, No bottle in any stock is older than 1907." Now, Doctor, when you send a prescription to your pharmacist, are you *always, invariably*, sure that the latter takes the precaution which so great a chemist as Lloyd finds necessary, that your prescription does not contain a single ingredient which is older than 1907? Possibly the reply to this question may enlighten you as to some of the disappointments you have experienced in the application of medicines.

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The greatest social force in the world is the quickening influence of a high ideal. —Edward T. Devine

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### A PLEA FOR THERAPEUTICS

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In *The Virginia Medical Semi-Monthly*, for February 7, Prof. Upshur makes a strong plea for the retention of therapeutics, by the state examining boards. The closing words of his paper are as follows:

"In conclusion, I plead for high ideals in the standard of therapeutics. No department of medicine can be studied which, by the acquirement of a thorough knowledge, will redound more fully in benefits to suffering humanity, broadening as it does the resources of the physician and enabling him to administer remedies too scientifically ever to grope and blunder. It will give greater confidence in his own powers for good, and

so impress the sense of right that the base counterfits are readily recognized and eliminated. So will the regular profession be redeemed from error, and firmly stand, established in truth and righteousness."

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### STROPHANTHIN

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*Folia Therapeutica* contributes an interesting note on the intravenous injection of strophanthin. The dose is one milligram (gr. 1-67). Frankel, after its use in fifty cases, reported that within a few minutes the pulse became strong, and the cyanotic symptoms were relieved very rapidly. The injections gave rise to no pain, but in a few cases rigors and pyrexia followed. Mendel's experience in five cases was less encouraging. In one the improvement lasted two days, and in three others no effects at all were produced. Schonheim used strophanthin in eight cases; his conclusions were:

1. An intravenous injection should be given in cases of cardiac failure which do not yield to ordinary medical measures.

2. Strophanthin raises the blood-pressure, produces diuresis, relieves congestion, but does not influence the pulse-rate. These effects last a few days and if necessary the injections may then be repeated.

3. In some cases rigors, giddiness, vomiting and headache may follow the injection, but subsiding in a few hours.

Hedinger had fifteen patients. His conclusions were:

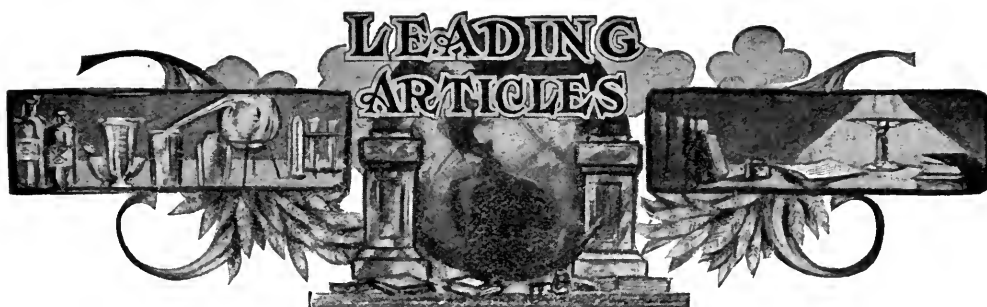
1. Strophanthin acts quickly and effectively in cases of circulatory failure, as evidenced by his last series of cases.

2. The undesirable sequelæ, pyrexia and rigors, are due to bacterial contamination of the solution.

3. The effect of the injections does not become less as they are persisted with, unless of course the condition of the patient deteriorates rapidly.

4. In doses of 1 milligram every twenty-four hours there is no fear of any toxic cumulative action.

5. The intravenous injection of strophanthin possesses advantages over the administration of digitalis by the mouth.



## MULTIPLE PERSONALITY AND THE SUBCONSCIOUS

The subconscious life or personality scientifically explained, with a discussion of the double personality of the Rev. Thomas C. Hanna

By S. P. GOODHART, Ph. B. (Yale), M. D., New York City

A CURSORY glance through the annals of the various sciences reveals astonishing progress in the past century, but in no branch of scientific research have greater results been achieved than in that pertaining to the phenomena of the human mind.

Freed from the shackles of religious dogma, hand in hand with other departments of medical research, the study of the protean manifestations of the human mind has been carried on upon a broad and rational basis and in a liberal, enlightened spirit.

Since man has become conscious of his being the mysteries of life, particularly of mental life, have been a theme for his thought and speculation. The "coming and going" of man, the metamorphosis of matter, life and death, generation and decay, the bewildering phenomena of the normal and abnormal mind, human consciousness and self-consciousness, all of these have fascinated man's attention and stimulated his thought and imagination.

### *Early Ideas Concerning Mental Action*

The early conceptions of mental life have for us but historical interest. The ancients knew nothing of the brain, much less of its elaborate structure; indeed, even its function

was but speculated upon. Hippocrates, that master-mind of ancient medicine, was the first to maintain and proclaim the brain the seat of the mind, the source of intelligence, of volition and bodily activity. The interdependence of mental processes and brain-function did not dawn upon the scientific mind until years after. The early Greeks regarded the brain as but a single organ "for cooling the heart."

It remained for the methods of modern science to discover the facts and principles relating to the true functions of nerve-matter. Scientific research into the external aspect of gross nervous architecture having reached a high state of exactness, the stream of thought naturally turned into investigation of the nerve-elements, the minute cells within the brain; minute, indeed, until its wondrous and elaborate structure was revealed by the magnifying methods of the present day.

Not content with gross study, science has made an attempt, and indeed a highly successful one, to penetrate into the hidden laboratory of cellular life. The minute study of the brain-cells with their prolongations and nerve-fibers, technically known as *neurons*, and the associative connections and relations of *masses* of cells, has brought forth

a knowledge of nerve-structure heretofore hidden to research. Indeed a study of the finer architecture, the *minute anatomy*, of the brain, together with what the "mind students," the modern psychologists and scientific alienists, have learned, forms an epoch in the progress of this fascinating domain of science.

#### *Studies of Borderland Cases*

Correlated with investigations into the strictly physical elements are the studies of observers of mental phenomena in certain so-called "borderland" cases of perverted mental function. Our knowledge of the activities of the normal mind has been largely obtained by a study of these individuals so often met with among the highly cultured and intelligent, a class in which so-called functional mental disorders are most frequently seen. Heretofore these sufferers have received but little attention and scant sympathy. It is of far-reaching import, indeed, that these manifold manifestations of mild mental changes, these "borderland" cases, occur among those of highly developed nervous organization. This is, however, not surprising when we consider that the evolution of psychic life has been gradual and through successive periods of evolution. Most complex, most highly organized in the scale, man is yet the most unstable and most easily affected by hurtful influences. As in development, so in decay; the process of degeneration affects first the most highly developed, the most delicately organized structures of the brain, hence those with the highest mental attainments are most easily disturbed. In certain forms of mental disease we see this process well illustrated, the process of deterioration beginning with the highest, the most esthetic qualities, those last to appear in the process of evolution.

#### *Man and Lower Organisms*

A comparative study of nervous structure in the lower animals and in that of the highest product of development, man, associated with observations accompanying psychic manifestations, has explained much in this vast *terra incognita* of nature. In the lower organisms we find simple structure,

simple function; with ascent in the scale structure becomes more complex, function more differentiated and specialized, and we observe in the brain of the higher vertebrates, reaching the highest complexity in man, large nervous centers of association working together in varied and astonishingly complex groupings.

The human brain really is composed of masses of nerve-cells, with concomitant psychic activity representing a series of centers and in a sense furnishing the anatomical basis of independent unities or of fragmentary personalities. According to what is known as the "retraction theory" of recent investigators the nerve-fiber in the brain has the power to contract and expand, thus at times "making," at others "breaking," the circuit of communication between the association-centers. Here is given the rational psychical basis for the "make-up" and "break-up" of individuality. The terms "subconscious" and "subliminal" have come to be used as signifying that part of human selfconsciousness that has become in a sense detached or submerged and lies beneath the surface of the waking consciousness, the working personality.

The study of subconscious life in man has proven of vital importance. Indeed the mechanism of consciousness itself is hidden within the depths of the subliminal self, and thither we must descend to understand certain phenomena of the human mind.

#### *The Subconscious Self*

The influences of this subconscious self or personality are of interest to the physician, the scientist, the theologian, the reformer and the criminologist. The operations of the subliminal self explain much that has until now been looked upon by many as in the realms of the mysterious, by some as belonging to the supernatural. From early times down to the present the mysteries of so-called supernatural phenomena have played an important role in the world's drama. Some of the great minds, past and present, have been impressed by those peculiar manifestations variously termed theosophy, trance-states, spiritualism, occultism, and what not.

After exposing the majority of these as charlatan, to the critical and observant it becomes evident that behind the various devices resorted to there still remain many unusual manifestations giving color to the idea that there must be some rational explanation for these phenomena. In the light of modern scientific investigation in this country and on the Continent these phenomena are recognized as manifestations of the subconscious self, possessed of knowledge unknown to the upper waking consciousness of the subject.

The revelation of "crystal-gazing" and "shell-hearing" as well as those of the "spirit medium" are all products of subconscious mental activity. In "crystal-gazing" and "shell-hearing" the subject gazes into a crystal or listens to the "roaring" within the shell; experiences, incidents, information, hidden to the upper consciousness, arise to the borderland of waking self and are visually or aurally projected into the crystal or shell. "Messages" from the "world of spirit" are in some instances received in the same way. "Spirit mediums," many of them sincere, have the power of self- or auto-hypnosis, thus bringing their own subconscious self and its "information" to the surface.

There is positive evidence of the co-existence of one or more "selves" in many individuals, and probably in all of us. Within the subliminal, or subconscious, self there may be buried memories, lost experiences, knowledge unknown to the upper self, at times reacting upon the upper consciousness, giving color to the deportment of the waking self, the active personality. The contents of the subconscious may rise to the surface of consciousness in part, or if emerging in its entirety, a quite new personality appears, supplanting for the time being the upper self, the latter in turn falling into the realms of the subliminal self. In hypnosis it is the subliminal self that rises to the surface and becomes for the time the dominating personality. The subconscious self is the more impressionable and suggestible. Thus two selves may exist within the same individual.

"Planchette writing," as it is called, is another means of showing the possible dissociation of human consciousness. By this means, in proper subjects, it may be shown that while the hand of the subject is registering impressions upon paper the attention of the upper consciousness is held by an entirely different operation and is totally oblivious of what the hand is registering. The experiments may be made so complex as to prove absolutely two independent streams of conscious activity within the same being.

The most striking and convincing evidence of the presence of two or more egos within the one individual is that afforded by cases of dual and multiple personality. In these persons one skull seems to cover two or more independent minds. They may differ widely in content of knowledge, judgment, emotions, and in esthetic feelings. The celebrated "Jekyll and Hyde" story and Hawthorne's remarkable tale, "Archibald Malmaison," doubtless originated in some observed cases of dual personality.

It was the writer's good fortune to have under his observation and experimental control, in conjunction with Doctor Boris Sidis, of Harvard, the most complete and remarkable instance of complete amnesia or loss of memory later developing dual personality that has been recorded in medical or lay literature. It is the first instance recorded where the loss of memory-content was absolute and complete, even to the obliteration of the fundamental experiences, the simplest memories of life. The experimental details and methods have been published in a recent work.\* As the case so well illustrates subconscious phenomena, it will be outlined here.

#### *The Case of the Rev. Thomas C. Hanna*

The subject was the Rev. Thomas C. Hanna, a young Baptist clergyman of Plantsville, Conn. Mr. Hanna is a learned, highly cultured man of scholarly attainments and strong personality. While driving, on April 15, 1897, Mr. Hanna, stepping

\*"Multiple Personality," Sidis and Goodhart, 1905.

from his carriage lost his foothold and fell to the ground head foremost. He was picked up in a state of unconsciousness. After several hours of effort by local physicians he opened his eyes and gazed upon what to him was a new world.

The young clergyman had apparently lost absolutely and completely every vestige of memory of his past life. He knew naught of himself, his environment was to him strange and bizarre. He was as an infant borne into a new world. He did not differentiate animate from inanimate objects; the world about him was but a chaos of sensations. Objects, distance, time, did not exist for him. He had to begin life apparently anew, the very simplest functions had to be explained; he did not know how to walk, could not interpret the sensation of hunger nor did he know how to satisfy his simplest wants.

However, he learned with most astonishing avidity. In reading and writing he began as a child. First he learned to print, and in this condition he was ambidextrous. In his normal, or primary, state he had been an excellent Greek, Latin, Hebrew and English scholar. His memory for newly acquired material was remarkably acute. The almost hyperacuity of his faculties was illustrated by the marvellous ease with which he learned to play several instruments with which in his primary, or normal, state he had not even been familiar. In a few weeks Mr. Hanna passed through stages that else represent years of development. The young clergyman's "new life," the secondary personality, began with the awakening after the injury. The primary life, the one representing the experiences and memories of the normal Mr. Hanna, ceased with the fall from the carriage; the secondary personality began with the awakening.

#### *Alternation of the Two Personalities*

By experimental methods of "tapping" the subconscious it was possible to prove that the primary life lay hidden within the regions of the subconscious. The dormant subconscious personality was stimulated and arose to the surface of waking consciousness.

The two personalities finally alternated, each dominating for the time being in turn the personality of Mr. Hanna. Mr. Hanna's skull for the time being covered two distinct personalities. Each was in a sense independent of the other and knew only indirectly of the other. Mr. Hanna of the secondary state was a rather awkward, reticent young fellow, struggling to acquire knowledge, his past an oblivion. The two selves knew each other only indirectly by information from others. The handwriting and emotional qualities, even the temperaments in some respects, differed widely.

The two egos alternated and were invariably separated by a varying interval of deep sleep. As may be imagined, many amusing and many more painful situations were experienced by the young clergyman during this remarkable period of his life. For example, relatives and friends that he knew only in the one "state" he would be quite indifferent to in the other unless he knew them in both "states." In short, the two personalities were strangers to each other. Eventually, by forcing more rapid alternations of the two states they both met for a moment upon the threshold of self-consciousness, were finally blended together, and united into the one normal Mr. Hanna. This case is the first one in recorded literature where the gap separating the two distinct personalities was bridged over by direct memory.

#### *Mr. Hanna's First Awakening*

The first awakening of Mr. Hanna to his former primary self is well described in the clergyman's own words, and is as follows:

"I awoke after a good night's sleep at about four o'clock with the full knowledge of the past life except what had occurred since the accident. The surprise was exceedingly great, to find one's self in bed in a typical New York home when the last memory was of driving over the country roads of Connecticut. Even this memory was not immediate, rather a general resemblance of being at home and at work. Fortunately the room-mate was recognized as my brother and being rudely awakened by

me he was challenged for an explanation. This being made hastily, I was cautioned to remain quiet while a "friend" was called. This friend proved to be one of the specialists. Questions and answers flew so fast that it was some time before I could realize the state of the case. I utterly refused to believe the story of the accident and of the following weeks, and took the whole for a huge joke. This was natural from the humor of the situation. The three persons by no means made a presentable appearance, yet all were apparently sincere, the doctor taking notes like a stenographer, the brother executing a war-dance in jubilation, and I racking my brains for some possible motive for such a practical joke. The doctor was then a stranger to me, so no confidence would be placed in him. The brother was continually bursting into fits of uncontrollable joy, the result of relief from so long a strain.

### *The Limit of Memory*

"When questioned, I could recall events up to the time of my commencing to alight from the carriage. I told of having felt at the time an acute rheumatic pain in my knee which prevented its use. While attempting to relieve it by the other foot, the lap-robe became entangled and I swayed helplessly. This memory, then, harmonized with the statement of the others, and the conclusive proof was felt when a watch was seen to indicate 4:15 although daylight was appearing. I remembered well that at the date of my memorable drive daylight would not have come until much later than 4:15. This convinced me of the lapse of considerable time in accordance with the statements of the others.

"The physical sensation was of great weakness. There was a slight feeling of pain in the head, and my back felt weak. Otherwise I felt as well as usual.

"Before long, however, an uncontrollable drowsiness came, and after some attempts to keep awake, I was allowed to fall asleep. The feeling of sleepiness was at the first entirely within my control, but not realizing the necessity of remaining awake, a neces-

sity that was later impressed upon me by the specialists, and having partially yielded to this feeling of drowsiness, the will was powerless to respond to even the urgent request to resist sleep. The drowsiness was powerful, bringing a delicious sense of rest hardly suggested by ordinary sleep. Being awakened out of a heavy sleep later in the morning, I knew nothing of the experience of the early hours, but was again living and acting according to the second life. It was only at a later date that I could learn what had occurred during that half hour. The questions asked and the interest shown in regard to my condition, even while I was feeling as usual, aroused my curiosity and surprise.

"At the next awakening to the normal, or at least to the primary state, there was memory for what had occurred in the last primary state. As the room and house were different, it was evident to me that there had been another lapse of time, and the first inquiry was, "How long has it been this time?" The next time curiosity was greatly aroused because on coming into the secondary state, I found myself dressed and sitting in a chair, and with the comfortable feeling of a good breakfast eaten, and an uncomfortable feeling of pinholes in the flesh made by the doctor while I was falling asleep. I had no knowledge of the pain when the needles pierced the flesh, but felt a sharp pain on awakening. However, no information could be gained, and I was of the belief that I had fallen asleep, and during that time had been fed and dressed by others.

### *Resolutions in the Primary and in the Secondary States*

"In the primary state I found myself making thoughtlessly a resolution that on again waking in the secondary state I would not be alarmed at the change; but of course at the next change there was no memory of the resolution and consequently distress was felt. While in the one state I was informed of my experience in the other, so that I knew in an indirect way the state of things. It was thus that in each state I came to a

determination to assist the scientists in effecting a cure. Yet as each resolution was not known to the other state, there was not the necessary harmony of action. One resolution was that while in the primary state an effort would be made by me to remain awake at all hazards, day and night, until a continuance in this state seemed probable. The other resolution made in the secondary state was to cling to the facts in that state and that life with a grip of steel, yet to allow the passing into what the doctors called the intermediary state, when they would be able to give me the facts of the other life while I was holding to the present also.

"The first mental struggle was during the very next primary state, which, through the doctors' earnest request and my own extraordinary effort, was already prolonged to three or four hours. All were assembled in the laboratory. The feeling of drowsiness had hitherto been resisted but was growing continually more heavy, especially during the quiet of the experimenting.

"In vain were these interesting proceedings watched by me, in vain were the efforts of all, even the needle points, which were not felt, yet were faintly known in the dim receding consciousness. Yet there was that determination to remain awake at all events, and the struggle continued in half-consciousness for a long time.

"Suddenly there was a glimpse of the secondary life; only a glimpse, it is true, yet a revelation of infinite wonder as being the first real insight into one state from the other. Instantly the thought came, what is the use of enduring this severe struggle when invited into that attractive life, the secondary state? This statement was not thus carefully formulated, but that was the impulse of the moment, the feeling was just to that effect. But saying mentally again, what is the use? there was a letting go, and the primary life was again lost.

"While in the last instant of the primary state, as has been said, there was a glimpse of the secondary state, yet there was in the secondary state no memory whatever of the primary, but just the old unshaken deter-

mination to carry out as far as possible the plan of the doctors. They had a full understanding of the peculiar mental state, and so everything was ready for the decisive battle.

### *The Decisive Battle*

"It came in the same house in which the first awakening to the primary state had taken place. It was early evening, after a day of unusual activity and enjoyment, bringing great fatigue and drowsiness. Struggling against this I felt a severe pain in the head. There was a regret at having bound myself to such a resolution, yet a determination to stand by it at all hazards. There was every encouragement from the doctors, who were eagerly plying me with questions and insisting on facts of the experience of the other state. The persons and places of the primary life (learned by the doctors, by questioning friends, and myself in my different states) were mentioned and strongly impressed upon my mind. Especially those persons whom I knew in both states were referred to. I was still in the secondary state, but the other life dawned on me, and nothing but my will pertinaciously clung to the secondary state.

"Both states were dim and only the doctors' tiresome repetitions and persistent hammering on the reluctant mind made them gradually more real. I felt quite vexed at what seemed the obstinacy of the doctors, yet was coming more and more to feel the force of their statements. Yet even now only the first position was gained in the conflict, for while both lives were presented to the mind, where was the possibility of combining them? And had I now lived and felt each life? Yet how could one person live and feel both lives? Here was the critical point. But the doctors persisted they were both *my* lives, and indeed I knew each one was, though it is impossible to take two men and make them both into one.

"But the lives were constantly becoming more and more personal, until at last, by a deliberate, voluntary act, the two were seized and have both remained for half a



year to the present date, though for some time after the recovery it was difficult to dovetail together the detached portions of each life so as to present a continuous story."

A complete cure was subsequently effected and the Rev. Mr. Hanna completely restored to his former self and individuality. He has resumed his pastoral work and has remained in the full enjoyment of mental and physical health. Nothing has occurred to mar the complete blending of the two separate and distinct lives, unless it be the recollection of the apparent paradox.

Other cases of dual and multiple personality might be cited from literature, and some others have come under personal observation.

The entire subject of subconscious phenomena is most fascinating. The problems involved are of immense practical significance. To what extent are we at times responsible for our actions; to what degree is the criminologist to make the various "personalities" the factor in his conclusions? These and a multitude of other questions suggest themselves in contemplating the influences of the subconscious self upon our experiences and conduct.

## CONCERNING THE DOCTOR'S FEE

Being number eight in a series of articles  
"Concerning the Doctor Himself," dealing  
with various matters of medical economics

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana  
Professor of Principles of Surgery, Medical Department of Indiana University, Indianapolis

ONCE upon a time a worthy young man entered the practice of medicine.

He saw no reason why he could not become rich as well as great. He hung his sign so that it swung to the four winds of heaven, but soon he wondered at its unattractiveness.

His first caller was a book-agent who sold him a forty-volume system that contained all the knowledge of the medical world, presumably from the time of Adam, although history does not say that the latter used fig leaves for its poulticing properties. Again he was visited, this time by a committee of ladies from a prominent church seeking aid for the body surrounding divers souls in South Africa. He was good for one soul, of course. Their successor proved to be the colonel, he who marshalled the ward in election time, and being a patriot believing in the cause (?), the doctor gladly came to the relief of the party-treasury. His next visitor was a patient, who took the doctor's time and sampled of his medicine with only

a promise to pay in return. Next day brought the landlord; summer the ice-man; winter the coal-dealer; spring and fall the tailor; while daily the butcher, the baker and the grocer paid him their respects and separated him from his bank-account.

### *Surplus Lessens While Wisdom Grows*

Thus each day the doctor's surplus lessened while his wisdom grew. A year of genteel starvation, then other years when even crusts and crumbs were hoarded, till at last the hoped-for time of peace and plenty came in sight.

The practice of medicine is certainly like a rainbow, its beautiful colors are matched in frequent times and places, yet the pot of gold is as far away in our manhood as our childish efforts found it in the long-ago.

The profession of medicine is losing much of the incentive and most of the reward which came to our fathers. We learn to be praised by a few and cursed by the many. We once received the best in the land be-

cause we demanded it. We now get the worst because the people think we are glad to get anything.

### *Three Timely Notices*

The editorial page of *The Indiana State Medical Society Journal* gave us three timely notices recently having to do with our own welfare: one on the division of fees, one as to charging the clergy, and a third as to our self-protection in the matter of making a livelihood. From this latter I quote the following:

"Through our public health boards, with their lectures and free distribution of literature, we are teaching the public how to prevent and cure disease. We are sanctioning the erection and maintenance of public hospitals and dispensaries for the free treatment of people, ninety percent of whom can well afford a physician's fee. We are using our influence to secure free antitoxin injections, free vaccination, free school inspections, free tuberculosis sanatoria, and numerous other free benefits for the people which directly take from many physicians the means of earning a living. We are countenancing contract-practice which every day is widening its sphere of usefulness to a large percentage of our population while at the same time lowering the dignity of our profession and exerting a demoralizing effect upon fees in general for professional services. And to cap the climax, the daily papers announce that the courts in some states have decided that physicians have no legal right to fix or maintain uniform fees, while in other states attempts are being made to enact laws permanently fixing a low maximum fee for any service rendered by a physician, and in one of the states an attempt is being made to enact a law making it compulsory for physicians to charge for their time and not for skill."

### *Corporation Demands*

Taking up specific incidents, the following is but a specimen of what it seems the doctor can be made to do. A certain Philadelphia casualty company is author of the following communication recently received:

"We are writing this letter to ascertain whether or not you are in a position to render first aid to employees of our various assured at "Easyville" who may be injured. If you can find it convenient to do this, please go over the enclosed Fee Bills, and if the same are acceptable, please attach your signature to one and forward the same direct to this office, whereupon we shall immediately send out notifications to all policyholders in "Easyville" to send injured employees to you for treatment.

"When injured employees are sent to your office it will be necessary to secure from them a statement on the blank enclosed, headed 'Statement of Accident', also to endeavor to secure a release in consideration of first aid rendered, and the making of a report regarding the injured party's condition at the time the service is rendered."

The fee bills which were enclosed were regular printed schedules to be signed in duplicate and returned to The Casualty Company, Philadelphia, Pa.

### SCHEDULE OF SURGEON'S FEES

"These fees have been established with the understanding that they include in all cases the necessary appliances and dressings, such as splints, bandages, antiseptics, etc., for the proper treatment of each and every case, and which are to be supplied by the attending surgeon. It is also understood that in the treatment of all cases the strictest antiseptic precautions will be observed, according to the latest approved methods of surgery, for it is only by such measures that complete results can be obtained and the interest of the Company protected.

"*Fractures, Dislocations, Amputations and Minor Injuries.*—It is understood that under these headings the sums specified shall include after-treatment in all ordinary cases, but should unforeseen and unusual complications arise, in which extra attendance may be necessary, said attendance in such cases and in all others not specified when specially authorized shall be charged for at a rate not to exceed 50 percent of the specified amount for similar services.

*"Fractures—Reducing and Dressing.—*Femur, \$15.00; patella, \$10.00; tibia and fibula, \$8.00; clavicle, \$8.00; humerus, \$8.00; radius and ulna, \$5.00; jaws, \$5.00; ribs, \$4.00; nasal bones, \$3.00.

*"Dislocations—Reducing and Dressing.—*Hip, \$12.00; shoulder-joint, \$8.00; wrist, \$5.00; elbow, \$5.00; finger, \$3.00; lower jaw, \$3.00.

*"Amputations.—*At thigh, \$20.00; at shoulder-joint, \$20.00; at knee, \$18.00; of arm, \$17.00; of both hands, \$17.00; of forearm, \$15.00; of leg, \$15.00; of foot, \$12.00; of either hand, \$10.00; of two fingers, \$7.50; of one finger, \$4.00; of each additional finger, \$3.00; of one toe, \$3.50; of each additional toe, \$3.00.

*"Minor Injuries.—*By this it is understood treating incised or lacerated wounds of soft parts, such as scalp-wounds, etc.; also sprains, contusions and bruises, arresting hemorrhage, stitching wounds and treating the same: \$1.00 to \$3.00.

*"Miscellaneous.—*For examination of injured parties at Company's request, with a view to court testimony, including full and detailed reports at time of examination, \$3.00. For testimony in court as to the simple facts of the injury, per case, \$10.00. For expert testimony, according to value of same, per case, \$15.00 to \$25.00. Removing foreign bodies from eye or ear, \$1.00. Extirpation of eyeball, \$15.00. Reducing hernia and applying truss where rupture has occurred during the discharge of ordinary duty, \$3.50. Passing catheter, \$0.50. Trephining skull (not advised). Cutting down upon and ligating large vessels, \$10.00. Administering anesthetics (assistant) according to time occupied, \$1.00 to \$3.00."

The contract also provides that a special blank should be filled out by the surgeon (answering twenty-one questions) and furthermore, they desire the doctor to fill out and have signed by the injured party another blank (answering forty-eight questions) and, in the words of the Company, "endeavor to secure a release from the injured party in consideration of the first aid rendered." (And the extravagant remuneration that

they offer for the above surgical, medico-legal and legal services should be borne in mind.)

A courteous letter was sent to the above Company, ignoring the fee bill and thanking them for favors, but stating that it was not the place nor the duty of the physician to look after the liability of the Company and secure releases. To this they replied as follows:

"Replying to your letter of the 14th inst., in which you state that you feel as if you had no authority in securing statement and release from the injured party at the time of dressing his injury, we think you need have no objections on that point when we advise you that *eminent surgeons throughout the country* who have accepted our fee bill do this; they are taking into consideration the volume of business coming their way, which to say the least is remunerative."

#### *Like the Irishman's Horse*

Just exactly where the excessive remuneration would come in is like the Irishman's horse. By the time he had enough cases to make a living he would have worked himself to death.

"One dollar for administering an anesthetic," which must include chloroform or ether, hypodermics prepared for use, towels for the face, and the pleasure of cleaning up the vomit which is a constant feature in emergency work. "Three dollars and a half for amputating one toe." (We might almost add, "marked down from four ninety-nine.") "Seventeen dollars for amputating both hands." (Anything else that the man wants cut off will be removed for eight-and-a-third.) "For amputating the thigh, \$20.00," which does not include an extra fee of \$3.00 for your assistants and the anesthetizer; twenty-three in all (skidoo for me). "Fracture of the femur, \$15.00, which must include in all cases the necessary appliances and dressings such as splints, bandages, antiseptics, etc., and which are to be supplied by the attending surgeon; it is also agreed that under these headings the sum specified shall include after-treatment in all ordinary cases." (This means, if John

Smith falls over a truck and breaks his femur, that some "eminent surgeons" have agreed to set John's leg, place him in an Allen or an Ambulatory splint and visit him frequently for ten to fifteen weeks, all for the munificent sum of \$15.00!

This form of contract, a few years ago, was submitted to me by several indemnity companies, but the fees agreed upon were probably 75 percent of our customary charge for such cases, and when the company pays for all service rendered, such a contract is far more profitable than the honesty of any set of men I have had to deal with, should collections be made otherwise and from the injured men themselves.

The larger and best indemnity companies have discarded fee-bill contracts, paying a fair fee based on local charges. The smaller and cheaper companies, however, attempt to lessen the cost of insurance at the expense of the "easy" member—the doctor. But the above fee bill is the limit: it represents a charge of one-fifth—20 percent of our customary fees, with after-care thrown in free.

Then they have the nerve to want to sell us malpractice insurance, and demand that we carry it before we get their work to do. But really, 20 percent of the fee bill is apparently an excessive charge for some doctors' services, for there are men in our town who sell their services to families for two dollars a year. The following clipping from *The Journal of the American Medical Association* is self-explanatory:

#### *Lodge Practice*

"It is satisfactory to receive occasionally competent, though unwilling, testimony that the attempts to exploit the medical profession by the so-called 'friendly societies' are not altogether a success." Such testimony is afforded by the late chief organizer of the Brotherhood of Owls in Michigan, Wisconsin, Minnesota and the Dakotas in an interview reported in *The Seattle Times* of November 27. After telling how he had to give up his work in these states on account of inability to obtain the services of physicians for the order, he says:

"As a result, the Eagles and the Owls are crumbling to pieces in that territory. The Eagles have raised their dues from 75 cents to \$1.00 a month, but even at that they can not get along because of the increased cost of furnishing medical care to members. The lodge of Red Men at St. Cloud is by 1200 smaller than it was two years ago, owing to this reason." He also says, however, that there are physicians in Seattle and elsewhere in the Pacific states who furnish free medical attendance to the families of the members of these orders who pay 50 cents a quarter for the privilege. "Under this arrangement the physician who does the work for the Ballard Nest of Owls, for instance, gets approximately \$50.00 a month for doing work for which he would otherwise get \$450."

This naive confession, that the organization represented by this witness sweats the physician down to only one-ninth of what he ought to receive is worth noting. Authorities on natural history tell us that the owl is a bird of unlimited appetite and that it will devour more than its own weight of its fellow creatures every few days. It certainly appears, therefore, that this secret benefit organization has chosen a very appropriate name.

So long as the doctor is expected to pay the butcher, the baker, the tailor, and the landlord there is no ethical or esthetic reason for us to give him our services for nothing or for an honorarium. The doctors at the top of the profession who talk most of ethics charge the biggest fees. The man who makes his fee a small one does so for fear he can not get a larger one or in the hope that quantity and not quality will be demanded of him in his services.

#### *The Doctor's Fee Bill*

This brings us to the question of the labor-union principle, which some societies have adopted by publishing a schedule of fees for their services. Such a procedure is not only inadvisable, but most unjust. It places a premium on ignorance and lack of skill. It limits the value of our services and places us and our work on the common-labor basis.

The schedule of Los Angeles County, California, is the most complete and best one yet seen, because it consists of several pages of printed matter in booklet form, covering all possible conditions, medical, surgical, and specialistic.

The poor man cannot sit in the game out there, however, and the limit is the roof. For instance, "normal confinements, \$100.00;" "abdominal operations, \$3000 to \$5000 and up." They have the true spirit and exercise good judgment in placing a charitable value on their services.

Several years ago the county societies in Indiana published a similar schedule, which contains the following munificent rewards:

"Normal confinements within four miles of town, \$10.00, and 50 cents an hour after six hours' detention; office consultation and medicine, 50 cents; complete examination and advice with medicine, \$1.00 to \$2.00; twins delivered for \$15.00; placenta-prævia cases cared for for \$25.00."

Wouldn't it be worth my son's while to spend ten years' time and at least \$5000 in money to learn how to do these things (not considering the economic factor of saving a life occasionally) for the above rewards?

I think it would be advisable to send my sons to a "free" trade-school after leaving high school or college: make one a brick-mason, another a plumber, and the third an electrician. I can then give them the money they would spend on a medical education, and they could probably lend the "old man" something to live on in his old age, if the latter had to do his work and charge according to the "union schedule." If a doctor's time is worth only fifty cents an hour after working six hours for a lazy baby, it isn't worth any more any other time—and that is less than the plumber, the mason and the electrician charge where they are "on the job."

But this schedule is munificent in comparison with the fees in other places I have visited. I was in a neighboring city in consultation recently, and a patient came into the doctor's office. After examination some "stomach medicine and neuralgia tablets"

were prescribed. Three ounces of elixir of lactopeptine and twenty-five migraine tablets were dispensed for fifty cents. In one locality visited in Ohio I was told of several physicians who charge a dollar a call for country visits within five miles of town and twenty-five cents for 4-ounce prescriptions. Dispensing the latter is not bad from a commercial standpoint, for there is usually a profit of 200 or 300 percent in the deal. Charging simply for medicine, however, ignores compensation for our skill, our ability, our time, our expense of education, our life insurance and our cost of living and raising a family.

#### *Socalled Pauper Practice*

The question of the care of those who cannot pay offers as many problems for solution as does that of getting pay from those who have the money. In Michigan the Tuscola County Medical Society has contracted to do all the charity work, and the following statement offers the best means for doing away with competition and underbidding for county-work among physicians and insures proper medical services for all indigent persons while it distributes the work so as to make it burdensome for no one. After becoming incorporated as a county society, the following communication was sent to the board of supervisors:

"To the Honorable Board of Supervisors of Tuscola County: There is dissatisfaction existing in relation to the present method of rendering medical aid to the indigent poor of Tuscola County. First, among the people, because by contracting with a certain physician to look after all the indigent cases in a certain township or district they are robbed of the privilege of making their own choice of a physician and are sometimes compelled to be treated by someone who is very distasteful to them and in whom they do not have that confidence and trust often so necessary to their comfort and satisfaction. Because of these peculiarities of people, a physician is sometimes called, and often does, care for an indigent case for which he receives nothing because some other physician holds a contract for the township in which

the patient lives. With the candid desire of rendering these conditions more agreeable to all concerned the Tuscola County Medical Society has formulated a plan which, if adopted, it is believed will obviate the difficulty and make harmonious the relationship of patient, physician and supervisor.

"The plan, simply stated, is this: Let the supervisors pay to our Society an average sum each year, such sum to be based upon what has been paid for the medical care of the indigent poor of the County for the past three years, and each member of the Tuscola County Medical Society contracts to take care of all the indigent work that comes to him with an order from the county supervisor.

"Such a plan can cost the county no more for medical services than it has paid in the past. It will give to the poor patient the

privilege of selecting the physician he would choose were he paying his own bills. It will tend to divide the indigent work more nearly equally among the several physicians of the county, and, at the same time, it will put into the treasury of the County Medical Society a fund, a portion of which it purposes to use for the general improvement of the Society and its members individually, thereby bringing directly a benefit to all the people of the county."

The supervisors accepted the proposition and made a contract with the society. The Society is to be paid in quarterly installments. In addition to the amount to be paid, which is about \$4000 per year, the county pays for all antitoxin and also agrees to pay all physicians who render extraordinary service in time of an epidemic of small-pox or other contagious diseases.

## M U S T A R D - S E E D M E D I C A T I O N

Two cases in which the alkaloidal granules, compared to mustard seed on account of their size, were shown to possess therapeutic effectiveness

By M. CLAYTON THRUSH, Ph. M., M. D., Philadelphia

A NUMBER of my patients have very aptly compared the alkaloidal granules to mustard seeds and I am frequently confronted with the remark, "Oh, what tiny little pills! They look almost too small to be of any value." But after taking a few of these "tiny little pills" I notice a decided change of opinion, as the following case will illustrate:

### *Relief of Pulmonary Congestion*

Mrs. L., age 70, refined and cultured old lady, who was caught out in a storm, her clothes becoming quite wet before she reached home; a few hours later she was suddenly taken with a severe chill lasting fifteen minutes and a stabbing pain over lower portion of thorax on the right side, which pain became quite severe in a short time, so that I was hastily summoned.

On arriving at her home I found the patient in a very sick condition. The entire lower lobe of the right lung was congested, temperature 104°F, respiration 30, and pulse quite rapid and bounding, rate 130. A nurse was at once procured and treatment instituted.

A large plaster of cataplasms of kaolin was placed over the congested area and covered with a cotton jacket made in the usual manner from cotton batting. Liquid diet was ordered and eight 1-4-grain calomel triturations were given at half-hour intervals, followed by a saline purge. Granules of defervescent compound (aconitine, digitalin and veratrine) were ordered, one to be given every hour until the temperature reached normal. When the patient saw the granules she exclaimed, "Will these tiny little pills do me any good?" I enjoined her to wait and see. The first granule was given at 3 p. m., tem-

perature being 104°F.; a second was given at 4 p. m., when the skin was slightly moist; a third at 5 p. m., when the skin was decidedly moist and temperature down to 103°F. Another one at 6 p. m., and now she was sweating freely with temperature 101°F. At 7 p. m. the sweat was pouring out of her freely, and at 8 p. m. she was "taking a bath", as she expressed it, and the temperature was now normal. In other words, the temperature dropped from 104°F. to normal in five hours.

The nurse now changed her garments, and the granules were continued at three-hour intervals. The next morning, when I called, the patient was resting comfortably and wished to sit up in a chair. Examination of the chest showed the congested area rapidly disappearing, and a speedy convalescence resulted. Being a splendid type of Christian character she remarked: "How appropriate is the biblical expression: 'If we have but the faith of a mustard seed we can move yonder mountain.' Truly these pills have wonderful power."

#### *In a Case of Myocarditis*

Another case will illustrate the value of a vascular sedative in certain cases of myocarditis with over-action of the left ventricle (compensatory).

Miss S., age 35, suffered with severe attacks of rheumatism during the adolescent period, the result being a mitral regurgitation, followed later by an associated stenosis and myocarditis of moderate degree.

When first called I found her propped up in bed, affected with advanced cardiac disease. There was marked edema of extremities as well as around orbit and in abdomen, in fact almost a general anasarca due to failure of compensation, double mitral murmur and aortic insufficiency. Pulse was variable and at times rather rapid and weak. Under treatment she rapidly improved so that in three weeks the edema had almost disappeared from her limbs and body, but she complained of a peculiar unpleasant sensation around the heart, as though the heart were swelling and trying to get out. This condition prevented sleep, so I ordered aconitine, 1-134-grain granules three times a day, the result being surprising. She experienced relief at once and at present the heart-action is excellent, the murmurs are only slight, the volume of pulse good, and the patient is able to go around and pursue her occupation as manager of a dressmaking establishment.

In heart-cases where there is over-action and hypertension I have always derived excellent results from this line of treatment.

## THE COSMOS OF A STUDENT'S GARDEN

The story that the planting of a rose-slip tells the student, of the meaning and fulfillment of life. Not a medical article—but an inspiration to "growth"

By CHARLES EUGENE BANKS, Montera, Washington

THE sharp thorn upon the rose slip cut into my thumb and the red blood sprang forth to the sunlight. I thought of the rose leaves that were hidden away in that bit of crooked, bristling stalk of wood, looked again at the crimson drop on my thumb, and wondered if the thorn might not recognize the fact that it had

brought forth a premature blossom outside of its own nature.

The little garden I have made my own is away up in the Puget Sound country in the foothills of the Cascade range of mountains. All this land was at one time covered thickly with giant fir trees hundreds of feet high. More than fifteen years ago the avarice of



"Waupello Lodge," Bungalow of Charles Eugene Banks. Mr. and Mrs. Banks and their Angora Cat.

man swept them away, as a farmer sweeps away the golden stalks of a wheat field. The land was left desolate, covered with underbrush, ragged with splintered stumps, impassable from half-demolished tree tops, and the refuse of tree trunks. For in those days it did not pay the timbermen to take anything but the straightest and clearest-bodied logs. Trees were plentiful for the day, and sufficient unto that day was the tree thereof. And now, all about this little patch of rich ground I have cleared is scattered enough rotting timber to keep warm the poor of all the cities of America for at least one winter.

But deforestation is being followed with gentler methods, and others, like myself, have come into this beautiful country of soft rains, luminous skies, magnificent stars, sublime mountain peaks, musical ocean winds and fertile soil to make the earth once more beautiful, but in a different way.

As I put this rose slip into the ground—it is not above a foot in height—there comes to me the comparison of it to the lofty fir it is replacing. Across the rough roadway that is called Lexington Avenue, and just within the shadow of a group of young firs selfsown, lies the trunk of a great fir tree, as sound and clean as when it came crashing down among its complaining kindred fifteen years ago. It was evidently cut in the spring when the sap was running, and so has not rotted. Why it was not used no one will ever know. It is straight, and the grain true. Once it towered high overhead, straight and fresh and green, the winds sounding in its top, like the strains of a pipe organ played by a master. The rose slip I am planting to take its place might lie upon that great trunk unnoticed. Yet it has overthrown that giant and for many generations to come will hold the land that once belonged to the firs.



That is the Science of Life. The drop of blood upon my thumb that answered to the thrust of the thorn has come the same long journey from ooze and slime to this rich rose color. It has drawn before it the savage forces (like the men who cut away these trees) laid desolate the forests of coarser flesh, so that the finer might find room to grow.

Here is my garden! Mark the wall that shuts it in. A hundred miles of solid alabaster, with pillars of pure pearl at either end, some fourteen thousand feet their tops above the sea! It is a rare wall for a garden fifty by a hundred feet, is it not? It is like the rose stalk I am planting in place of the great fir overthrown. This little spot was as much too small for the primeval trees as the mountain range seems too large for my garden wall. But I see nothing inharmonious in either. The fiery Mars that looked last night upon me standing here in the stillness

of mysterious night seemed none to big for the scene. Nature has no discords. Her work is perfection always.

*The Spirit of Beauty Hidden Within*

Into the soft rich soil, O rose! Somewhere within thy crooked stem there hides the spirit of such beauty as shall make all this garden glad before the summer goes its way. Like the tiny drop of blood upon my hand; like the giant mountain peak, and the far-flung range of snow capped and tumultuous mountains; like the fallen fir and the far away star in the sky you hold your course unswerving. A million years ago thy parent entrusted to thy keeping its form and beauty and fragrance. It gave to thee the Rose. And that trust you have never betrayed through all thy journeyings. Still in thy seed each year thou hast wrapped the old form and color and fragrance, and still the returning season has brought it forth



Corner of Living Room in Mr. Banks' Bungalow.

again. So has the lily been faithful to its trust, and so the violet. But thou, more than all, for into so many and diverse forms of shrub and tree hast thou matured for man's delight, as well as for his food, that it would not seem strange if thou hadst forgotten thy message and have gone astray delivering another word!

But the Great Intelligence is in you as in all. As I look upon the curving branches of shrub and tree, and think of the rolling waves of the blue Pacific out there under the arching sky, and see how perfectly the long sweep of the distant mountain range fits to the arching sky-line, and note that if the two ends of any of these things from the least to the greatest were to follow out the curve begun they would surely meet in the perfect circle in time, I am thrilled with the understanding of God. His law is ever and always that—a return to Him. There is no straight line in the universe of God's making. There is nothing of His creating that is "stale, flat and unprofitable." The straight line comes to an end and perishes of itself. The curve comes surely home again.

How prettily curved will be the rose petals that must come out of this plain stalk! What glow of color will circle about the heart of the flower. How the whole blossom will strive to reach perfection in globular form!

"From worlds not quickened by the sun  
A portion of the gift is won."

Dear old Mother Earth! What a faithful nurse art thou for all thy children. The milk that the lips of life suck from thy breasts flows perpetual to the touch of love. The brotherhood of the world is in it. If I do love the dogwood blossom it is not because there is virtue in me more than in the flower. It is life flowing through flower and man making both really one. Nothing can destroy that flow but wickedness. When I have broken the law of love I have separated myself from flower and shrub and mountain and man. I am alone. That is the pun-

ishment for disobedience to the Gentle Spirit.

Work is the salvation of man. It ennobles him. But to dig in the earth and plant seeds—that is the sweetest employment man can know! Beauty lies so close in the warm earth, waiting only for the placing of those little electric batteries of seeds to marshal all her glorious train and come forth trailing her clouds of delicate colors. I look up from my work to see my neigh-



My Neighbor's Children and "Tinkle Bell"

bors children coming toward me. They stop to sit on a rug in the sunlight where Tinkle Bell, our Angora cat, lies asleep. They wake her and tie a ribbon about her neck. They laugh aloud at the picture she makes with this strange decoration. It does not add to her beauty. No decoration can enhance the grace and charm of nature. The animal is perfect in itself. Only we forked sticks in the moving world need embellishments to make us presentable. I note the ribbon in Dorothy's hair. It is becoming. The light on Elizabeth's face is beautiful, something like the light that is in the rose, not of this world. I remember Wordsworth's lines:

"Our birth is but a sleep and a forgetting;  
The soul that rises with us, our life's star,  
Hath had elsewhere its setting,  
And cometh from afar,  
Not in entire forgetfulness,  
And not in utter nakedness,  
But trailing clouds of glory do we come  
From God, who is our home;  
Heaven lies about us in our infancy!  
Shadows of the prison-house begin to close  
Upon the growing boy—"

Ah, yes; the years have drawn a veil between us and the world of realities. It is only when we are at work in the earth that we become as little children and the inner eye gets glimpses of the cosmos. Here, in my garden, lies the book of life. When I am fortunate enough to turn a page I find new and beautiful sentences written clear and bold, the reading of which gives me great joy.

### *Growing Toward Completeness*

I stoop to examine the waxen bud upon the lilac that I planted last fall and I hear the rhythmic beat of light footsteps, and know she who is the real leaf-turner for me is coming with some suggestion that will make the day memorable. It is the same with us as with the rose, and the lilac bud, and the branches of the tall fir, and the tasseled alder bushes. We are striving toward a rondure—toward a completeness in our beings. When the dusk has fallen and we sit before the grate fire in our little study, the fir sticks snapping in the grate, the soft wind sighing in the dogwoods, the window, the pictures of friends gazing dreamily at us from their places on the wall—in the silence that is a blessing, we grow toward fulfilment. The odor of the fresh earth is still in my nostrils, and the under and over-world of clarified vision still in my heart. The cosmos of my garden has come with me into the house, and it needs not words to tell Her that I have seen somewhat strange and important.

Perhaps something like the following verses will drift down out of the soft shadows and we will set down the lines together:

Happy the man who in some rural glade  
Contented dwells, nor of its confines tires;  
The rich, sweet soil upturning with his spade  
Where the dark earth, with little toil, is made  
To yield sufficient for his few desires.

The rush and turmoil of the greedy town,  
Its sin and pride and shame, to him unknown;  
Nor beggar's whine, nor surly Mammon's frown;  
Nor cracked-voiced vender crying up and down.  
Nor drunkard's oath, nor ruined Virtue's moan.

Instead, the morning pulsing full with life,  
O'erflooded with the varied song of birds,  
The pure, fresh air with scent of flower's rife,  
Nor discord here, nor sound of sordid strife;  
But eloquence without disturbing words.

With swelling breast he roams the dewy meads,  
The meanest flow'r his joy and tender care;  
The murmur'ing winds they stir the tangled reeds,  
Fit orchestra adapted to the needs  
Of Nature's drama acted for him there.

Of castle massive often he has read,  
Of mosque, of temple and cathedral grand—  
Yet turns for beauty to the fields instead,  
Finds some new pleasure wheresoe'er he tread,  
In meadow, wood or on the yielding sand.

The cliff abrupt; the river's silver flow;  
The eagle's flight; the tempest-ridden wind,  
The gleaming salmon swinging to and fro  
In quiet pool; the timid, graceful roe—  
All dear companions of his student mind.

For him the peace of close converse with God.  
To him the door of Nature opens wide;  
The woods, the hills, the daisy-spangled sod,  
He loves them all. Where others blindly trod  
He moves serene—his being satisfied.

Amid such scenes his gentle life is passed,  
The ward of Wisdom, learning what is best;  
His creed to love, his church the vaulted vast,  
In contemplation richest at the last—  
He falls asleep upon a kindly breast.

The rain is softly falling on the roof of the bungalow. It comes down gently with a caressing touch. The rose bush which I planted this morning will give the shower welcome and the garden will show green and fresh with the morning sunlight, for it is now past the rainy season, and this shower is a grateful surprise to all growing things, myself included. For I wish to grow even as the lilies, not that I may outdo Solomon in his glory, but that I may have the beauty in myself that I know is behind all material things, the beauty that "was never on land or sea," but is land and sea and sky and all the universe. I do not mind handling the thorny rose slips, since I have seen what is contained in that homely forked stick, with no beauty upon it, but all beauty hiding within, or without, and over, and around it, to have manifestation ere long in the queen of all flowers. Ah, the pure passion of the rose, the pure, sweet never-ending passion!



# MEDICINAL ACTIVITIES IN VEGETABLE MATTER

A classification of the active principles found in plants;  
with a condensed statement of their nature, character,  
and the advantages which they possess therapeutically

By WILLIS EUGENE EVERETTE, M. D., Tacoma, Washington

IT has gradually been growing upon the mind of the active, truth-seeking physician that the giving of "drugs" in the shape of all kinds of compounds and mixtures, hoping that some definite therapeutic action would be produced thereby, is all a mistake; also that it is now time for us to realize that we can economically obtain the concentrated active and potential principles from all of the medicinal vegetable matters and that we can

quickly secure just the exact result that we desire when giving such medicaments without being obliged to use so much unnecessary drug-material as has heretofore been used in giving medicines for disease.

In this article I call special attention to the "alkaloids", as they are the most potentially energetic of all of the active available principles of medicinal vegetable matters.

## THE MEDICINALLY ACTIVE PRINCIPLES THAT ARE OBTAINED FROM VEGETABLE MATTERS

**ETHIONOIDS**—The excessively volatile nitrogenous oxidized hydrocarbons, that are the radioactive (Ether-ion-oids) organic emanations—both automatic and responsive—(most terrifically poisonous) which with *extreme analytical and chemical care* may be extracted from certain forms of vegetable matters (The *organic-etheric-ionic bodies* that are constantly being "radiated" from certain forms of vegetable matter.)

**ALKALOIDS**—The available medicinal and concentrated *potential energy* of the entire plant.  
AMIDES—(CHNO)—*Fixed Solids*—As strychnine, morphine, aconitine, etc.  
AMINES—(CHN)—*Volatile Liquids*—As nicotine, cicutine, sparteine, etc.

**GLUCOSOIDS**—Usually an easily fermentable oxidized vegetable hydrocarbon (very rarely contains any *nitrogen*)—As strophanthin, salicin, etc.

**NEUTRALOIDS**—The non-fermentable oxidized hydrocarbons of the plant (somewhat related to *glucosoids*)—As glycyrrhizin, elaterin, aloin, santonin, etc.

**AMAROIDS**—The bitter extractive principles of the entire plant—(as represented by the bitter taste of galenic medicaments)—Of varying and indefinite chemical composition.

**ETHER-OLEOIDS**—The natural *volatile* ester-ethers of the vegetable matter. The native odoriferous (Ester-oleoids) and ethereal essential oils—Can also be produced synthetically (artificial essential oils) (Etholeoids)  
1.—(Nitrogenated)—(C<sub>20</sub>H<sub>27</sub>O<sub>11</sub>N) ..... As oil of bitter almond  
2.—(Sulphurated)—(C<sub>4</sub>H<sub>5</sub>NS) ..... As ethereal oil of mustard  
3.—(Oxygenated)—(C<sub>8</sub>H<sub>14</sub>O<sub>4</sub>) ..... As oil of eucalyptus  
4.—(Terpenes)—(C<sub>10</sub>H<sub>16</sub>) ..... As oil of turpentine  
Synthetic forms of *Ether-Oleoids* may be produced from *Terpenes*, by metamorphic action with heated water and added elements; and also, many artificial "ester-ethers" (or Ether-Oleoids) may be produced by recomposition by similar thermo aqueous action.

**FIXED OLEOIDS**—The *non-volatile* ester-ethers of the *fatty acids* that are taken from vegetable matters. These fatty acids are *Stearic, Oleic, and Palmitic Acids* (The fixed oils, from seeds, beans, nuts, and fruits)—As palm oil, olive oil, castor-bean oil, cocoanut oil, croton oil.

**RESINOUS OLEOIDS**—The *native solutions* of the resinoid principle, naturally dissolved in the ether-oleoid of the vegetable matter (A native oleoresin of the plant)—As oil of cubeb, oil of capsicum, oil of ginger, oil of black pepper.

**BALSAMOIDS**—The *soft or liquid* resinoid principle containing the native odoriferous part of the plant, together with (usually both) cinnamic or benzoic acids—As balsam of tolu, balsam of Peru, balsam of benzoin balsam of storax.

**GUMOIDS**—The *soft, and usually non-hardening*, resinoids—As the *native exudations* of the vegetable matter. The naturally *dried sap* of the plant—As gum myrrh, gum asafetida, gum acacia, gum tragacanth.

**RESINOIDS**—**NATIVE**—The *solid or semi-solid* (induced or native) uncrystallized “resinous exudations” from vegetable matters, of a more or less indefinite form of chemical composition—As resin of pine, resin of jalap, resin of podophyllum.

**ARTIFICIAL**—Another form of resinoids are the (more or less) concentrated *entire* fixed activities (artificially produced) of the vegetable matter in a rather incompatible and antagonistic indefinite chemical mixture of *medicinal paste*—As cactin, juglandin, hydrastin.

**ANTAGONISTIC QUALITIES**—*Jaborandi* gives two antagonistic alkaloids—pilocarpine and jaborine. The *poppy plant* is another illustration, as it gives morphine and thebaine, which are antagonistic to each other. From the *resinous opium* of the poppy plant there are obtained, 18 alkaloids, 2 neutraloids, 2 organic acids, and sugar, gums, etc., all more or less antagonistic to each other.

### *Alkaloidology*

1. *Alkaloids*—such as are used in the practice of the science of medicine—are composed of highly nitrogenous organic compounds which are closely related to the “earth alkalis” in their capacity of uniting with acids to form crystallizable salts.

2. Alkaloids belong to two physical classes, which chemically are called, *amides* and *amines*.

3. An amide alkaloid is a complex compound of oxygen, hydrogen, carbon and nitrogen, and is always in a solid state and is free from any appreciable odor.

4. An amine alkaloid is less complex in character, does not contain oxygen, is very unstable to the action of heat, is a highly nitrogenous mixture of carbon and hydrogen, is always in a liquid state, and has always more or less of an ammoniacal odor.

5. Alkaloids may or may not be a *native* chemical constituent of the vegetable matters from which they are taken; as they may be produced by metamorphic action of the active principles of the plant during their process of extraction.

6. Alkaloids, normally in the original vegetable matters, when in contact with putrefactive organic compounds and substances, often change into another biochemical class of alkaloids, designated as “ptomaines.” We do not know Dr. Everette’s authority for this statement, which certainly is at variance with accepted ideas. Pto-  
maines are the products of the putrefaction of animal matter, as the result of the presence of certain saprophytic bacteria. The veg-

table alkaloids, on the contrary, are normal constituents of plant-life.—ED.] These secondary alkaloids (ptomaines) are seemingly the primal cause of most of the diseases that man is subject to—for they seem to set in action peculiar conditions for the spontaneous formation of various kinds of actual microbic growths. Here I cite algæ bacteria. (*Scient. Amer. Suppl.*, Jan. 4, 1908.)

The experiments of Prof. Dunbar (Director of the Hygienic Institute, of Hamburg) show that bacteria, yeast fungi and mold fungi are produced by algæ, in organic and inorganic culture liquids: “The possibility of a higher species giving birth to numerous distinct lower species, under the influence of particular chemical and physical agencies, is an idea wholly new to biological science.” “If Prof. Dunbar’s conclusions are verified

. . . a new light will be thrown on the origin of these lowly organisms.” “After the theory of spontaneous generation of bacteria had been exploded by the researches of Pasteur, Cohn, and Tyndall, it was generally assumed that bacteria had existed since the beginning of life, as a ‘constant species.’ . . . Now, after years of preliminary researches, Prof. Dunbar has succeeded in observing the development of yeasts and molds as well as bacteria—from his pure culture of algæ.”

7. Alkaloids are the most available concentrated form of the total active medicinal constituents of all vegetable matters; and, therefore, the alkaloids—both amide and amine—are the most important of all the organic compounds that are used in the practice of the science of medicine.

8. Amide alkaloids are such crystalline solids as aconitine, morphine, strychnine, quinine, etc.

9. Amine alkaloids are such volatile liquids as sparteine, cicutine, nicotine, etc.

10. Alkaloids are not only the most concentrated and energetic of the (ordinarily available) potential activities of the vegetable matters from which they were extracted, but—when properly extracted and isolated from their cognate antagonistic activities in the vegetable matter—(1) they can always be relied upon to be *decisive* in therapeutic action; (2) they are *invariably* of uniform amount of concentrative potential medicinal energy; (3) the alkaloidal salts, made therefrom, being quickly *soluble* in always available liquids, are thus very valuable for rapid working, when it is imperative to administer instantly the medicament hypodermically, or even intravenously—as shown by the researches of Baccelli of Rome; (4) the *quantity* of dosage is trifling and they are practically *odorless*—both conditions having special psychological values for the physician to realize; (5) they are *easily* absorbable and practically *palatable* if ever any medicament can be called “palatable;” (6) they have less tendency to create anorexia or to cause nausea than any other form of medicament. (7) For these aforesaid reasons alkaloids are the most important physiotherapeutic remedies that we can obtain by our entire knowledge of the physical therapeutics that we can employ from the use of our *materia medica*. (8) For alkaloidal intravenous therapy see *La Via delle Vene Aperta, ai Remedi Eroici*. (G. Baccelli, Rome. Tipografia Nazionale, 1907.)

11. It is a law in physiotherapy that organic nitrogenous medicaments have greater activity, as poisons, as nervines, and as remedial medicines than any other class of medicament, whether galenical or mineral.

12. An alkaloid, in high or maximum dose, will always have an opposite and an entirely different kind and degree of therapeutic action from what the same alkaloid will have when it is administered in a low or minimum dose.

13. An alkaloid—or in fact any medication—in *high* or maximum dose, will always depress the physical energy of the body, whether in health or disease.

14. *Per contra*, any class of medications, alkaloids included, when given in *low* or minimum dose, will always stimulate the physical energies of the body, whether healthy or diseased.

15. Any class of medicament having a high organic nitrogenous content, when given in maximum dose, will always act powerfully as a depressant on the entire nervous system, whether in health or illness.

16. Any class of medicament having a high nitrogenous content, when given in a minimum dose, will always act powerfully as a decided stimulant on the entire nervous system, whether in strength or weakness.

17. Alkaloids, as they consist very largely of nitrogen, can therefore be depended upon to give exactly the kind and degree of therapeutic action and result that is desired and required by the physician, whenever the giving of medicaments is necessitated for nervous diseases.

18. Alkaloids, therefore, are the best therapeutic stimulants and depressants that we can use as remedial and medicinal agents.

19. *Glucosoids*, or *glucosides*, are compounds of oxygen, carbon and hydrogen, and sometimes (very rarely) contain a slight amount of nitrogen. In contact with any organic fermentative process, or in contact with inorganic aqueous acids, they change into glucose, with formation of phenols, aldehydes and alcohols. Salicin, strophanthin, etc., are varieties of glucosoids.

20. *Neutraloids* are *nonfermentable*, oxidized hydrocarbons somewhat related to glucosoids. Aloin, elaterin and glycyrrhizin are varieties of neutraloids.

21. *Amaroids* are the *bitter principles* of vegetable matters, of somewhat varying chemical composition, and are represented in the bitter taste of many galenic medications.

22. *Ether-Oleoids* are the volatile and odoriferous extracts, either native to the vegetable matter or chemically produced by a recombination with heated water. When

containing *nitrogen*, such as oil of bitter almond are produced. When containing *sulphur*, such as ethereal oil of mustard is produced. When containing *oxygen* such as oil of eucalyptus are produced. And when consisting of *carbon* and *hydrogen*, the "terpenes" are formed, such as oil of turpentine.

23. *Fixed-Oleoids*, as the fixed oils, are the nonvolatile ester-ethers of the fatty vegetable acids—such organic fatty acids as palmitic, stearic and oleic acids. They are produced in the form of the oil of olive fruit, castor bean, cotton-seed, nearly all kinds of nuts, croton oil, and from all forms of fatty, oily, vegetable matter.

24. *Resinous-Oleoids*, as oleoresins, are the native solutions of the resinoid principle normally dissolved in the native ether-oleoid of the vegetable matter. They are produced as the oils of cubebs, capsicum, ginger, etc.

25. *Balsamoids* are the plastic or *liquid resinoids*, as exudations from vegetable matter, containing the native odoriferous principle of the plant, with usually both benzoic and cinnamic acids. They are produced as balsam of tolu, balsam of Peru, balsam of benzoin, etc.

26. *Gumoids*, or *gum-resins*, are the soft, semisolid, nonhardening, resinous exudations from vegetable matter, such as gum asafetida, gum myrrh, and other gummy substances.

27. *Resinoids* are the hard or soft concentrated compounds of induced or native uncrystallizable exudations from vegetable matters. Certain forms of resinoids take in the entire fixed properties of the plant, and are therefore never of definite chemical composition, nor can they ever contain all of the volatile active medicinal part of the vegetable matter from which they were formed. The natural exuding resins of vegetable matter result from manipulation of the plants, such as the resin of pine, resin of jalap, resin of podophyllin, etc., while the artificially concentrated resinoids represent the virtues of the entire plant, such as cactin, hydrastin, juglandin, etc.

28. By a study of the above analysis of the available medicinal constituents of

plants we therefore find that the most potentially energetic of all of the available active principles of our medicinal vegetable matters are the alkaloids. For, as heretofore explained in paragraph 10:

a.) The alkaloids contain all of the *medicinally* potential energy of the plant, i. e., in a commercial sense. [The alkaloids and other active principles.—ED.]

b.) The alkaloids are always *uniform* in their amount of concentrative energy.

c.) The alkaloids are *positive* and *decisive* in their therapeutic action, either as a *depressant* or as a *stimulant*, as desired.

d.) The alkaloids [or their salts] are quickly and easily *soluble*, and are small in necessary *quantity* of dosage.

e.) The alkaloids are *free from causing any excessive nausea or anorexia*.

f.) The alkaloids are neatly administered, and are free from any repugnant medicinal odor.

29. *The Poisonous Emanations from Vegetable Matters*.—a. We have now taken out all of the normal medicinal extractive principles from vegetable matters.

b.) But, there are other "potential forces" and "activities" in vegetable matters, that are rarely ever known or heard of outside of certain chemical laboratories of highly skilled analysts.

c.) These other "potential forces" are the excessively poisonous nitrogenous oxidized hydrocarbons, which are the ethereal and extremely volatile, organic, radioactive emanations from certain plants practically the *supernormal activities* of the vegetable world.

d.) These organic and excessively volatile and dangerous poisonous nitrogenous vegetable emanations have a radioactivity somewhat similar to inorganic radium and thorium compounds, both direct and toward each other, according to the degree of concentration (whether vapory and condensed) of the "emanations."

e.) These extremely poisonous and very volatile radioactive organic nitrogenous oxidized hydrocarbon vegetable emanations are constantly being given off by certain plants; and (when not artificially concentrated or

condensed into a vapory or a liquid form) seem to have a more or less beneficial oxidizing action on the carbon of the microbic life (i. e., bacteria) which is always, to a greater or lesser extent, in the surrounding atmosphere of the normal environment of the plant.

f.) Certain of these radioactive vegetable nitrogenous emanations, when in concentrated, condensed form, are so terrifically poisonous that when inhaled they will cause death by instant paralysis both of the sensory and the motor nervous systems; also, they are instant death to all forms of insect-life (when in the atmosphere of its excessively volatile vapor or emanation) when condensed into a vapory liquid and allowed to volatilize or evaporate into the air.

g.) I have named these volatile potential forces from vegetable matters "ethinoids," from their ethereal, ionic nature—as they are the organic, etheric, ionic bodies that are constantly being radiated from vegetable

matters to a greater or lesser degree, depending on the environment, soil, climate, and the botanical character of the plant.

h.) Whether or not we shall ever be able to condense these radioactive vegetable nitrogenous emanations into available liquids for direct medicinal purposes is about as difficult a medico-chemico-legal question for the student of synthetic and analytical chemistry and medicinal practice to solve, because of their intense volatile and poisonous qualities, while leaving no trace in the body after death for ordinary chemical analysis to discover, as is the related question of accurately defining the *supernormal* of the mental faculties of man to the student of the (so-called) psychic phenomena of telepathy, clairvoyance, clairsaudience, hypnotism, etc., that is now being very carefully and practically investigated by students of science. But as no study ever can possibly be too great for man to learn, therefore, *crede quod habes et habes!*

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## INDIAN BELIEFS AND SUPERSTITIONS

The ideas of the Indian concerning the spirit world and how it influences man and animals; his beliefs concerning health and the influence of "medicine"

By CHARLES S. MOODY, M. D., Mullan, Idaho

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IN a previous article I spoke of the influence that the spirits are supposed to exercise over the welfare of the Indian. In some manner never fully understood by me the spirits are supposed to inhabit the bodies of birds and animals. If I have understood aright, all birds and animals partake of these characteristics.

I doubt very much whether the savage himself could give a reasonable explanation of how this influence is exerted. He looks upon the lower orders of creation as his brothers, and upon some of them, indeed, with a great deal of veneration. Especially is this true of the bear family. An Indian never kills a bear without asking its pardon for the act. He does not hesitate to kill the animal, but

before doing so, or very shortly afterward, he addresses the animal somewhat as follows: "O bear, I have slain you, for my little ones need food, and your skin will make them warm when the weather is cold, but I hope, O bear, that you will forgive me and that all your ancestors and all your children will forgive me." This is not the exact language, but it will serve to illustrate what I mean. The same tender regard extends to practically all the lower animals. Even the rattlesnake is protected unless his snakeship insists on occupying the same tepee with the Indian. If the rattler is out on the hills attending strictly to his own affairs the Indian will certainly never molest him.



I started to tell about the totem, or fetish. The totem in different parts of the Northwest has different significations. For instance, in the far north it is a sort of rude history of the tribe or family, and at the same time it is supposed to ward off danger and protect that family from disease and disaster. With the Indians of the Pacific slope the totem never becomes a history of the tribe but is always an amulet for protection only.

In the olden days, when a young man became an initiate into the degree of warrior, he was caused to submit to various forms and ceremonies, the last of which was a vigil and fast enduring through a day and a night. With the first streak of dawn on the morning when the fast was concluded he was to arm himself and go forth. The first animal or bird that met his gaze was to be killed, and that animal or bird became his totem.

In these later days the form has been changed somewhat. The youngster is a candidate now as of yore, but he is not caused to undergo any protracted vigils and fasts. He is chosen or elected into full fellowship, in other words, he is called a man and allowed to choose his totem.

The same rule holds now as formerly with regard to the selection of the totem. It is the first object that meets his view in the morning after he becomes a man. In many instances this object is the common magpie or the common little striped squirrel, from the fact, I think, that these two are found in profusion about every Indian camp. My own (given me by the tribe) is the chipmunk, while that of my wife is the small black-and-white river-duck that is so common along our western rivers.

#### *Preparation of the Totem*

When the totem is chosen it is specially prepared for use by the wearer by the "sikiptawat." It is sewn into a buckskin bag and worn about the neck. In many graves that I have entered the totem was lying upon the sternum practically intact, while other portions of the clothing was rotted.

A few of the more highly educated Indians have abandoned the wearing of the totem, but it is present in practically all the tribes. The Catholic Indians have discarded it for the scapula, the latter fetish taking the place of the skin-bag and its contents.

As I stated before, I have never fully understood the supposed influence, but that it has something to do with the health of the wearer is evident. No Indian will sell his totem. Money, and what is more craved, liquor, will not tempt him to part with it. I have known the red brother to barter his horse, saddle, blankets, moccasins, pants, shirt, for whisky, but he never was known to barter his totem.

Indian belief in the efficacy of remedial agencies does not confine itself to the human family alone. The Indian believes that the salmon is affected by a "medicine" the same as a person. This is best illustrated by their custom of providing the fish with a "medicine" in the spring when the run is on.

#### *Fixing up his Bait*

The spring run of salmon begins early in March and continues throughout that month and well into April. At the time of the first run the fish take the hook very readily. The method of taking them is by baiting the hook with a large section of the roe from the female fish. In addition to this the savage fisherman climbs among the steep rocks that wall the river shore, and in some protected crevice he finds a stalk standing, bare and brown, that has survived the blasts of winter. At the bottom of this stalk lies a tuberous root of very aromatic smell and taste. When bruised, it exudes an oil. The Indian provides himself with a liberal supply of this root and returns to his canoe. He washes it clean and with two stones bruises it thoroughly. Then he washes his fishing line and anoints it well. Throwing the bruised roots in the bottom of the canoe he beats them with his paddle until it, too, is well scented with the aromatic oil. Upon the bruised mass of roots he lays the salmon eggs that are to serve for bait.

Now he is ready for the salmon. He pushes the canoe out into the stream, casts his baited hook overboard and sings to the god of chase for success. Nothing will tempt an Indian to fish with hook and line for salmon without first applying the "medicine." It matters not in the least to him that his white neighbors fish in the same stream and often from the same boat and, not using the "medicine," catch just as many fish as does the Indian. His belief is unshaken in the virtue of his remedy. I am not sure of the identity of the root they use but I think it is sweet cicely (*osmorrhiza longistylis*).

#### *The Remedy of the Parturient Woman*

The traveler in the pine regions of the West often is struck by seeing a "blazed" spot on the side of a large pine. This spot is something like three feet in length and may extend almost entirely around the tree. In many instances it is very old and the tree has grown over and partially concealed it. For several years I saw and wondered what these marks could mean. After my sojourn among the savages I learned. The *enciente* woman goes out into the forest, selects a large yellow pine and proceeds carefully to scalp the outer bark off a space. After she has denuded sufficient surface down nearly to the inner pulp she takes her

camass hook and peels off the pulp. This she dries and pounds into a very fine flour. Wetted with water into a porridge and eaten it is supposed to exercise a favorable influence over the process of gestation. This custom must be very old, for I have seen pine trees cut bearing this scar in which the wounded surface had been entirely covered by a new growth, many hundreds of years old.

Once in the South I was told by an old negro mammy that a skunk killed and eaten would make labor for the parturient woman easy. Investigation revealed the fact that many of the ignorant whites of that region held to the same belief. In investigating Indian customs I found the same belief. The striped skunk is not an article of diet even among the Indians. In fact I have never known an Indian to regale himself on a diet of the mephitic little rodent voluntarily. The pregnant female however often raps Mr. Skunk on the head while he is drinking at a spring and concocts herself a savory stew of the flesh. It is interesting to note that she does it with the same idea of lightening the pains of labor as does her white sister. Did the whites get it from the Indians or *vice versa*? Do not imagine, as the popular belief is, that an Indian woman gives birth as easily as an animal. Such is far from being the case.

## A CASE OF EXFOLIATIVE DERMATITIS

An intractable case of this stubborn disease, apparently autotoxemic in origin, with a discussion of the differential diagnosis, and some hints concerning treatment

By MILLARD F. CUPP, M. D., Metamora, Indiana

THE case here reported has given me, as well as two other physicians, considerable trouble. The photographs accompanying this will serve to enable my readers more readily to comprehend what follows in the way of description.

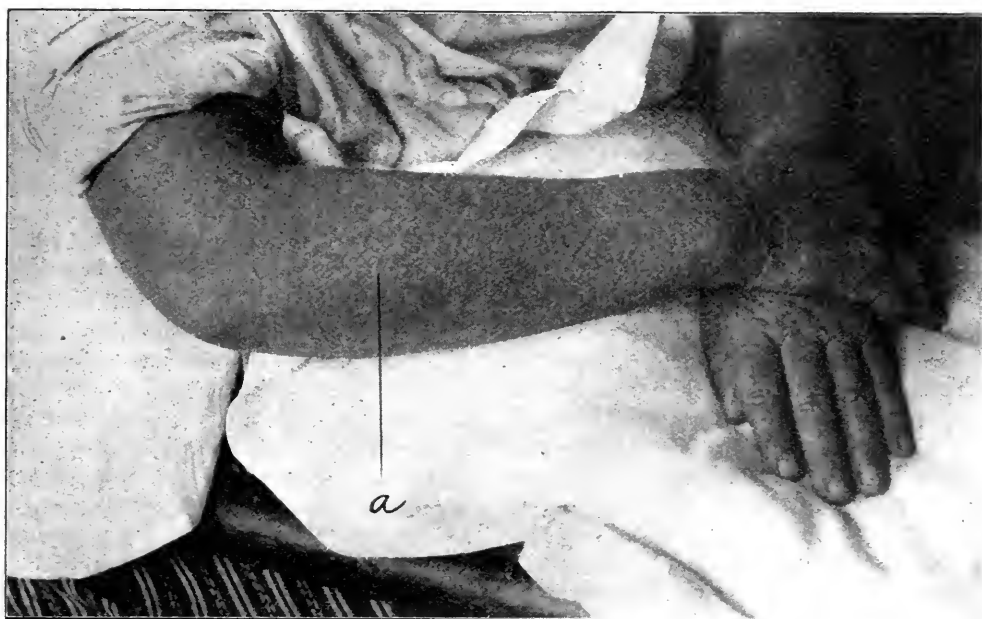
A lady, aged 51 years, presented herself October 7, 1907, with the skin eruption as

shown in certain parts of the accompanying photograph. Her father died at the age of 40 of diphtheria; mother died at age of 65, no diagnosis having been given out—"the doctors refused to say what ailed her." The patient claims that there has been neither consumption nor scrofula in the family. She resembles her father most, is

of medium height and rather fleshy, with a fair complexion, blue eyes, and light-brown hair.

She passed the climacteric period without special incident, but had not felt well for a year before consulting me, and lists her trouble at that time under the comprehensive term of "rheumatism"—a term which, as is well known, may mean almost anything in the disease line. She related that about the 10th of August of last year there had suddenly appeared, first on the forehead and

the eruption was in the form of papules, aggregated into rows of chains, somewhat like mountain-chains in places, and irregularly disposed in other places. The natural furrows of the skin were exaggerated, giving to it the appearance of ridges, which mostly ran transversely to the long axis of the body. The papules were about one-eighth inch, or slightly less, in diameter, somewhat flattened at the summits, especially after they were a few days old, having on the top a few fine whitish scales.



Showing Dr. Cupp's case of Dermatitis

back of the neck, an eruption which she was assured by her friends was the eruption caused by poison-ivy, i. e., *rhus toxicodendron*. From the head and neck this eruption rapidly spread to and involved the chest, trunk and arms. It was attended by much discomfort—an intense burning and itching, with swelling of the loose areolar tissue about the eyes.

At the time when the lady consulted me the face was of a dull-red hue, with considerable swelling about the eyes; over the neck the redness was nearly uniform, but on the trunk it was interrupted by areas, mainly linear, in which there was an approach to the normal color of the skin. On the trunk

The appetite at this time, and for some time following, was very poor, the pulse was accelerated, and there was a distinct loss of vigor. The tongue was covered with a whitish fur, while the mucous membranes of the mouth were redder than normal. There has been, at different times since the onset of this disease, deficient action both of kidneys and bowels, and at the present time the latter can only be made to act by the persistent use of laxative medicines. The urine when last tested showed an abnormal quantity of bile coloring matter, but no albumen.

The treatment was begun by prescribing saline cathartics (magnesium sulphate) after

calomel and podophyllin, and with the thorough action of these medicines and a few days' exhibition of quinine marked improvement took place. I thought it wise to give the patient the benefit of the doubt in the matter of the quinine, as she lives in a spot which might well be malarious. In addition to this internal medication I prescribed a soothing unguent for local application after thorough bathing in alkaline lotions, and ordered the diet regulated, with the omission of meats, pastry, cakes, gravies, and highly seasoned articles in general.

I have tried, at various times, either on my own initiative or on the advice of my colleagues, a number of other substances and compounds, among which I may name benzoated zinc oxide ointment, diachylon (freshly prepared), ichthyol in various combinations, carbenzol (diluted and undiluted), and finally, a simple mixture of bismuth subnitrate, starch and vaseline. The latter has seemed to have a better effect than any of the others. Along with this I am using a lotion of chemically pure zinc carbonate and zinc oxide with a small proportion of glycerin. When this was first tried it reduced the turgescence of the tissues rapidly, with a large measure of relief to the patient, but with its continued use it has gradually lost power, and now the patient sometimes complains that it increases the distress. This has been one of the characteristics of the case from the beginning—what would give relief at one time failed at another or caused actual pain. Hence we have been more or less at sea with regard to the probable result of any proposed line of treatment.

When she began to show signs of increasing anemia she was given the tincture of chloride of iron, and this preparation was resumed once or twice during the period when she was too sick to remain out of bed. At the present time she can sit up the greater part of the day, but finds it necessary to lie down for a period almost every day.

A trial was made of arsenic in small doses, but the irritation and distress increased with such promptness and severity, with an early increase in the subjective distress, that it was abandoned.

As has been remarked above, this case at times made quite favorable progress and bade fair to recover within a reasonable time, but in every instance these lulls have been followed by a fiercer attack. On the whole, however, something has been gained, not the least being a greater degree of resignation and less importunity to be "got well quick," which we all know often defeats the very end aimed at in the treatment of chronic diseases. In addition to a serener frame of mind she is now able to eat with more relish and has gained somewhat in strength. There has been, on the whole, less distress, if we except certain periods when the acute action has manifested a tendency to return.

The physical characteristics of the eruption have changed markedly also, there now being less papulation, particularly on the body, where there is more or less uniform redness and swelling. The papular area is likewise different from what it was in the beginning, being of a darker hue and with a greater tendency to dryness. Also, the eruption is less interspersed with areas wherein the skin was of a more natural color. At a point on the extensor surface of the right forearm, about four inches below the elbow, and on the flexor surface of the left forearm at a point about opposite, that on the right, as shown in the photograph at "a," are the only patches that resembles the earlier characters of the eruption closely, though there is still a general resemblance.

The eruption on the face has never borne the papular characteristic.

In the folds of the elbows, the axillæ, on the chest, and on the lateral aspect of the neck there have occurred, repeatedly, circumscribed ulcers, which have left cicatrices like those seen on the neck in the situation designated.

The scalp is inflamed and scaly and much of the hair has fallen out, but in this situation the action has been at no time intense.

#### *What Is It?*

Now, the question of diagnosis has never been precisely clear, though from the first it has seemed to me to resemble lichen ruber more closely than anything else I can think

of. However, I want the brethren to examine the pictures closely and let us have the benefit of their opinion. With the exception of the points at which ulceration took place there has been no weeping at any time, but uninterrupted dryness, with the papular character persistent except where there was much loose cellular tissue, at which points there has been so much tumescence that papules could hardly have retained their shape for more than a few hours at best.

The palms and soles have remained clear, the skin soft, smooth and natural throughout.

It may be that I have inadvertently omitted some points which could be of interest to the observer, but if anyone would like to ask for additional information it will be cheerfully given.

As stated above, the first analyses of the urine showed little deviation from the normal, and I am asking the staff of CLINICAL MEDICINE to make a careful analysis, the results of which they will no doubt be willing to make known. Amount of urine passed is about 48 ounces in the twenty-four hours.

Finally I will state that, in my opinion, and I believe in that of the two physicians who have seen this case in consultation, there is a certain degree of gastrohepatic catarrh. For a time this was connected with a deficiency in the elimination of urinary excretas, but after she had taken boldine for a time this appeared to clear up. The specimen of urine submitted will show whether this condition still persists.

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#### COMMENT BY DR. GEORGE H. CANDLER

I am not at all surprised at your inability to make a positive diagnosis here. Lichen ruber acuminatus (Kaposi) and pityriasis rubra pilaris are considered identical by Hyde and Montgomery. Under the second head these authors describe a disease of a "chronic, mildly inflammatory, exfoliating character and in which the characteristic lesions are fine, acuminate, firm papules situated at the mouth of the hair-follicles, displaying at the apex a horny plug, or scale, which dips into the follicle. This work contains an excellent

illustration showing distinctive papules with the plug on the back of the first joints of the digits. "As a rule," these authors say, "the disease begins insiduously, but may appear with or without mild systemic disturbance. As a rule the characteristic papules are not seen until after a period of seborrhœa sicca of the scalp, with or without palmar and plantar scaling patches." The disease usually is most marked over the extremities and on the back of the neck but may involve any or all parts of the body; "occurring over the hairy scalp the accumulated scales and crusts may form a dense and resisting cap." The nails are grayish-yellowish, longitudinally roughened and striated—"the little horny, blackish, conical papillæ covering the hair follicles occupying the dorsal surface of the first and second phalanges" are regarded as diagnostic and may be found when in all other parts of the body the identity of the papules has been lost in a general exfoliation."

Your case, it seems, can hardly be looked upon other than as a lichen ruber acuminatus (Kaposi)—the pityriasis rubra pilaris of Hyde and Montgomery.

Jackson and other writers use lichen pilaris and keratosis pilaris interchangeably to designate the above disorder. Crocker employs the term lichen spinulosus. There is at present a good deal of uncertainty and widely differing opinion regarding the lichens and psoriasiform dermatoses. In the past fifteen years some fifty different cases have been reported under as many differing names: lichenoid eruption, pityriasis lichenoides chronica, lichen variegatus, dermatitis psoriaformis nodularis, etc., etc. In each case the reporter has found some symptoms distinctly different from those appearing in the classical disorders, though in all the cases there were many common clinical and pathological features.

In Hebra's lichen-ruber cases death followed invariably. The Germans consider lichen ruber and pityriasis rubra pilaris distinct maladies, subdividing the latter into the two varieties, lichen acuminatus and lichen planus. This is probably correct. Your patient does not seem to present the

peculiar features of lichen planus or lichen ruber as met with in this country, though the two disorders may coexist. However, a number of variations from the regular type are met with. In pityriasis rubra the exfoliation is one of the most marked features, but you do not mention this as a symptom. The majority of the cases end fatally (see Hyde and Montgomery). Few cases have been reported here, and these were mostly males.

*Is it Autotoxemic in Origin?*

Frankly, we are inclined to look upon this as a peculiar exfoliative dermatitis (due to autotoxemia) similar in character to the disorder noted in the summer and autumn of the year 1891 in London. Savil contributed an excellent monograph on this subject (with illustrations), and the description he gives fits your case to a nicety.

The term parapsoriasis lichenoides might perhaps be used to describe the affection—the features presenting being between psoriasis and lichen planus. Here we have papules such as you describe; there is little if any infiltration of the skin; the disorder persists for months or years; it resists treatment and may markedly affect the general health, or the depraved condition (systemic) may cause the persistence of the dermic disease. The hair falls, but there is no marked crusting, while the nails, palms and soles are not affected markedly until late, if at all. The face may be edematous, but does not at any time present papules, and the latter gradually become less and less clearly defined, till at last they can be distinguished only about the flexor-surfaces of the upper extremities. Fine scales (inclined to be adherent) are present but do not at any time become very obvious: the “translucent horny covering,” which gives the flat-topped angular or polygonal papules of true lichen planus a “varnished” look, is lacking here. The skin in the latter malady remains pigmented after involution of a crop of papules, presenting a “smoky sepia-tinted or even blackish appearance.”

In the exfoliative dermatosis under consideration we may have involvement of the

entire body, the skin being reddened, rough, more or less scaly with groups of papules here and there. General health may or may not suffer, itching may or may not be severe. In some cases the disease disappears slowly after months, in others it persisted till death. Arsenic almost always caused increased severity of symptoms. A condition somewhat similar to this was described by Brocq as “lichenification.” He says, “it shows a tendency to recur.”

It would seem that this entire subject requires very careful revision. Physicians encountering peculiar dermatoses should first thoroughly familiarize themselves with the classic clinical pictures and then note minutely differences in type of eruption or course of disorder. Such cases should always be reported. In this instance the study of Von Harlengen, Hyde and Montgomery, and Crocker, will prove of interest. The last-named author deals exhaustively with the various forms of lichen, but his descriptions do not fit the present case.

The presence of furuncles, localized abscesses (as described by yourself) or gangrenous areas is not uncommon in older cases. Sloughing areas may be caused, first, by pressure and friction, secondly, by streptococcic invasion.

The etiology is at best problematical, but deranged metabolism with retention of waste must be regarded as basal causes.

The prognosis is guarded at best. The patient's general health must be poor or the disorder would not present. If the lesions are circumscribed and elimination is stimulated early, cure may result, but when the whole body is involved, and one of the most active eliminative organs inactive, the great strain thrown upon liver and kidneys must sooner or later tend to set up serious organic disease. The heart suffers after a time, and the patient, becoming anemic, thin and despondent, is likely to fall a victim to some seemingly trivial complaint; or he may grow weaker and weaker, develop nephritis and die in uremic coma. Rarely there are periods of well-being (this usually in active patients and in summer) which are

followed by an exacerbation and lowered power of resistance.

*Treatment of These Cases*

Common sense will tell us that primarily we must "clear out and clean up"—not alone the primæ viæ but the body generally. Then we must see to it that each and every organ does its work, while protected from receiving more material than it can dispose of properly. A careful examination of blood and urine will most likely reveal much, and we shall have to furnish the body with proper nutritive pabulum and, perhaps, an excess of some needed reparative material. Enough food to supply the body's necessities; no more. The right kind of food; nothing else. Exercise to the limit of tolerance, gentle, but forced, elimination—renal, intestinal, dermic. These are the basal pillars of our therapeutic edifice.

The skin, first of all, must be cleansed with a warm solution of magnesium sulphate. Into a gallon of water throw a double handful of wheat bran; let this boil, strain, then add 4 ounces of magnesium sulphate. To each pint add 4 drops of creolin. Sponge the body with this and then apply with gentle friction a little cold-cream. Repeat this daily. Wash out the bowel every other day with a warm salt solution.

The patient should walk a short half mile before taking food; an hour after eating make him get out again. If unable to do this let him exercise in his room with open window or have someone else exercise his limbs, this to be followed by massage if patient is very weak. Order light nutritious diet of eggs, fish, poultry, milk products, fruit, vegetables. Whole-wheat bread and other cereals. Lime and iron with other "cell-salts" are needed imperatively. Vibra-

tion and light faradic treatments may be applied by those who know how. The therapeutic (high-power) lamp would be of service in most cases.

Medicinally certain remedies are positively indicated at the outset, but here, if anywhere, medication (to be effective) must be so applied as to meet the pathological conditions present. These must of necessity vary in even a single case from time to time. However, calomel and iridin will certainly be indicated to insure hepatic activity, free stools and increased elimination of waste, giving 1-3 grain of each hourly for four doses, every third night, with a strong saline laxative next morning. Nuclein, 10 drops (under the tongue or hypodermically) twice a day, will prove an effective reconstructant, while xanthoxylin, gr. 1-3, stillingin, gr. 1-3, boldine, gr. 2-67, every three hours, will ensure the elimination of the effete products of active cell-reconstruction. Calx iodata in small but repeated doses will instantly suggest itself to the thinking therapist. I should give 1-12 grain on an empty stomach four times a day. Quassin will make the patient eat all he should have, and if digestion is at fault (as it usually is), papayotin will be called for. Finally, the sulphocarbolates of lime, zinc and sodium—alone or in combination—will be needed "to effect" to prevent putrefaction of the intestinal contents and further absorption of toxic matter.

With this foundation to build up on the doctor who will use his good common sense will find even such a peculiar case as the foregoing to yield to treatment. After all, we do not medicate named diseases but conditions.

Comment and further reports from the readers of this journal are desired.

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No man shall place a limit in thy strength;  
Such triumphs as no mortal ever gained  
May yet be thine if thou wilt but believe  
In thy Creator and thyself. At length  
Some feet will tread all heights now unattained  
Why not thine own? Press on; achieve! achieve!

—Ella Wheeler Wilcox

# DIFFICULTY OF STOPPING MORPHINE-TAKING

Some of the reasons why the morphine-habit fixes itself so strongly upon its victim, and why its discontinuance entails so much suffering; with the indicated treatment

By WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

WHY is it so hard to break the habit of morphine? To stop the use of tobacco, or even of alcohol, when one has become firmly grounded in their daily use, involves an effort of the will. It may be hard, especially to those who are accustomed to gratify their desires, right or wrong, regardless of their own well-being. But after all, it is simply a question of the will, and justly one is looked upon as a self-indulgent weakling who cannot stop the use of these things when it has been made evident to him that it is the right and proper thing to do.

## *The Desire There, But the Will Weak*

With the morphine-habit there is by no means such an exercise of will-power demanded in quitting the use of this drug. Many an unfortunate may ardently long to free himself from his chains; the will is there, the desire is there, but the ability is absent. As soon as the accustomed drug is discontinued, trouble begins. It is not mental; it is physical, and downright difficult, suffering at that. Aching, crawling, headache, neuralgia, and numberless other symptoms come to head off the unfortunate victim in his dash for liberty and relentlessly crush him down to his dungeon. I repeat, and desire to emphasize the statement, that there is no lack of will-power to prevent the morphine-habitude ceasing the use of that drug, but downright physical suffering, sufficient to daunt the strongest man on earth.

Curiously enough the greatest suffering is not due to pain. Time and again I have had patients say to me, when they were making the greatest complaint, that they did not have an ache or pain, but instead of that an indescribable sensation for which

pain, however severe, would be actually a relief. In one case, a man who suffered the worst form of pruritus ani I have ever known said that perhaps after all it was a good thing, since it diverted his mind from the sensation to which I refer. One would think that when the treatment for the prevention of suffering had succeeded in so far that the patient had neither ache nor pain, never missed a meal or went a single night without sufficient sleep, he would have nothing of which to complain; but this is not the case—even when this has been accomplished the patient still complains of this “indescribable sensation.”

## *The Causes of Suffering*

The causes of the suffering endured when the habitual morphine is withdrawn are twofold: In the first place the nerves have long been benumbed by the constant use of the drug. When this influence is removed it is quite natural that the returning sensation is exuberant, and that general hyperesthesia should occur. That this is the case is evident from the fact that even the special senses are more acute than usual, the sense of hearing and smell, as well as those of ordinary and special tactile sense are hyperacute. Patients tell me that they can hear the slightest whisper from one end of the house to the other, and recognize the approach of any member of the household by the odor. The sense of taste is likewise affected, so that richly seasoned articles of food excite distress and comparatively tasteless articles are relished as they would not be in the state of health. Hyperesthesia is a constant element and must be reckoned with.

The second element, however, is much the more important, and is possibly to a



certain extent the cause of the hyperesthesia. I refer to the toxemia present. The hypothesis which I proposed a year ago is that, owing to the action of morphine, toxins are retained in the cellular elements of the body. As the cells become super-charged with toxins of various and unknown nature, larger and still larger doses of morphine are required to prevent the overflow of these toxins into the circulation, there to become active. When the morphine is stopped, this inhibition ceases and the stores of toxins are poured out into the circulation. To these I attribute the withdrawal-symptoms.

*What is the Remedy?*

The remedy is obvious: The morphine should be slowly removed and elimination established, so that as fast as the toxins come into the circulation they may be carried out of the body. If this theory is correct, we ought to be able to remove the morphine with practically no suffering whatsoever; for, elimination preceding the withdrawal of the drug, the latter should be prolonged as much as necessary; until, the entire surplus of toxins having been carried out of the body, no morphine whatever is needed.

This is an ideal. Can it be realized?

Every case that presents itself is a new problem, since the toxins which are thus stored in the body are by no means always of the same variety. A close study of many patients convinces one that every patient has his own particular brand of toxins, which he retains in his body.

The difficulty is to distinguish between the sensations actually due to the presence of toxins and those which are strictly subjective in their nature. Experience here is the only guide. Those who have conducted

hundreds of these cases through the time required for a cure are able to form a pretty close estimate of what suffering is true and what is imaginary or, rather, autosuggestive. We must do these patients justice, and not confuse the two. Autosuggestive troubles are just as painful, just as difficult to endure, as those which have a distinct organic origin. It is not always easy to fit the method of elimination to the toxins which present their characteristic symptoms; nevertheless, the general rules of eliminative therapy are applicable, and will be found in the main sufficient. The main point is that we should not be in too much of a hurry to deprive the patient of that one drug which always restrains the suffering, be it what it may, and inflict unnecessary suffering in our anxiety to get rid of it too quickly. Time must be given, and I am firmly convinced that when a case is managed properly, the suffering may be reduced to a negligible point. Whether it is always wise to do this depends on the individual. Take the case of a physician who had formed the habit through devotion to his profession, to enable him to attend to his patients when he would be otherwise unfit; or of one who has acquired the habit through the indiscretion of the physician in allowing the continuous use of morphine through a painful disease; and the case is altogether different from that of some young degenerate who has gotten into the habit out of sheer curiosity. In the latter case pain is a therapeutic agency of distinct value, whose application produces beneficial results which cannot be secured from any other means known; and the value of pain should therefore not be underrated by the practitioner.

In case of doubt, let mercy rule.



# THE THEORY OF HOMEOPATHY

This article is the synopsis of lectures delivered at the  
New York Medical College for Women, in 1907.  
It gives a complete outline of homeopathic doctrine

By P. W. SHEDD, M. D., New York City

Associate Editor, American Journal of Homeopathy

THE cultivation of a beneficent militant spirit is desirable in students: the spirit which seeks out error to demolish it, and which has a keen blade ready in defense of truth. This demands a knowledge both of truth and error, both good and evil; when to engage actively an opponent who can and will recognize facts, and when to lose both hearing and speech in the presence of a fool.

Let us first acquire and agree upon certain technical terms. The old saying, "what is one man's meat is another man's poison," will never do in the theory of any science; meat must equal meat, and poison, poison, else we are soon in turmoil.

## *Original Meaning of "Homeopathic"*

The original application of the term, homeopathic, related to the use of drugs, and this is still its broad professional application; the use in proper dosage in disease of drugs, which, when administered to organisms in health, artificially produced a drug-disease or picture or syndrome similar in many important points to the natural disease-syndrome under consideration.

The drug-disease, or disturbance of vital equilibrium, thus produced in the healthy is termed the pathogeny, or pathogenesis, of that drug, and once established, is valid for all time. The indications for aconite, belladonna, bryonia, etc., established by the pathogenies of Hahnemann and his contemporaries will never be improved upon in their essentials, and will serve the human race *ad infinitum*.

Before proceeding to other than homeopathic uses of drug-substances (uses which are also demonstrable, and with which we must be acquainted), we might consider what it is that returns a diseased body to

health. Disregarding the numerous helpful factors of hygiene, sanitation, careful nursing—all or any of which, when lacking, tend to malequilibrium, or imbalance—we are impelled to regard as the greatest factor, not the administration of drug-substances according to any known law, but, the primal, genetic impulse of the human or any other organism, inherent, ancestral, reaching through countless evolutionary years, perfected and strengthened by its battles with the elements to attain and retain its type: all of which may be gathered together under the term, vitality, vital force, life.

## *Drugs are Adjuvants—not Cures*

Let us take the case of two individuals of similar type, strength and health—twin brothers—we may say, attacked with variola. Here we have a contagium impinging equally upon the two individuals. One is given the aid of everything but drugs; the other receives in addition the indicated remedies in proper dosage. Both recover; probably the latter first and best. The essential point, however, is that they get well; and the massive force which led them thereto was the vital force, the *vis medicatrix naturæ*, unaided or undirected in the one, scientifically aided or directed by drugs in the other. A drug, then, does not cure a disease; it is adjuvant, sometimes marvelously so, to nature's efforts to keep on the right track or to get back upon it; but the propulsive force, the healing, or equilibric, force, is profounder than any drug, and lies hidden in the mystery which we call life.

Having thus got the chiefest therapeutic factor into proper perspective, we may turn to our adjuvants, in this case, drugs. Are there laws governing the use of drugs, or is it all empiricism, guesswork? And what is

law, a law in science? Law in the legal sense does not exist in science. Legal law, or jurisprudence, is merely a *modus operandi*, a custom, which experience, sometimes bloody and cruel, has shown to subserve best the interests of some community. A man cast upon a desert island has no law save that of self-preservation, and needs none; but, a half dozen or more soon find that some regulation of right and property is essential to the general well-being, and "laws" are evolved. Another island, also peopled, might evolve "laws" suited to their communal comfort, but differing greatly from the first island-code.

Not so, precisely, in science, although the sociologic "laws" just mentioned may be developed according to the scientific principle. Law here presupposes and demands absolutely a mutual interdependence, an unvaried and dependable reaction, between two things or facts or series of facts. Law "unto itself" in science is more incomprehensible than infinitesimality; it is an incarnation of the impossible; an archimedean lever which moves no world because the fulcrum is lacking. Law is but the expression, more or less accurate, of a certain relation between parts, between facts, between series of facts; no more, no less; nor does the existence of one law negate the presence of others.

Therefore, to permit the expression (or the existence) of a scientific law, we must have two series of phenomena which present a constant relation with one another, which relation we term the law governing their interaction.

#### *Antiquity of the Homeopathic Law*

That there exists a law of drug-action, termed the homeopathic law, was noted by Hippocrates, and it has been verified in the last century of clinical experience thousands and thousands of times. Appreciation of this fact may be gained by utilizing the pathogenic syndrome of some well-known drug, e. g., aconite, belladonna, bryonia, in morbid states presenting a similar syndrome.

There is also another law, equally demonstrable, the antipathic, or the law of *contraria*

*contrariis curantur* (or *curentur*). This must be understood, first, that we may appreciate the value, immeasurably greater, of the homeopathic law; secondly, that we may learn its indications. Drugs used antipathically must be essentially powerful medicinal agents, and the dosage extremely large when compared to the required homeopathic dose of the identical substance; their indications do not permit of individualization, but are generic in type (although often directed against a single symptom, e. g., opium in insomnia or pain).

To illustrate this law most broadly, two drugs may be chosen: an excitant, *nux vomica*; a depressant, *gelsemium*. *Nux vomica* (or strychnine) is the standard tonic of the old school for asthenic, atonic conditions, debility, weakness, irregular and subnormal function of involuntary muscular tissue, indicating an exhausted nerve-force; atony of the gastrointestinal canal (not in irritable conditions); in labor to tone up the uterine muscle; in cardiac debility and functional irregularity; always the excitant agent against the contrary condition of torpidity. *Gelsemium* is depressant, paralyzant. It subdues all forms of neural excitation of whatever character or wherever located. It inhibits excessive nerve-action. Neural irritation, whether direct or reflex, comes uniformly under its influence. It is not the remedy where asthenia prevails; it is contraindicated where the circulation is feeble and there is tendency to congestion, especially if there be feeble circulation in the nerve centers. It is never given (antipathically) if the eyes are dull, the irides dilated, the countenance expressionless. In such cases it may prove fatal in quite moderate (antipathic) doses. The antipathic use of drugs is but palliative or harmful in most chronic cases, of comparatively uncertain benefit in most acute conditions, and is best suited to the needs of the emergency or ambulance surgeon.

#### *Meaning of the Term "Allopathic"*

The term, allopathic (*allos, alloios*—other, another) should also be understood and properly used. There is no allopathic law; allopathy is merely a method, the method

of derivation, of pukes and purges, of diaphoresis, diuresis, mustard plasters—in other words, a method of attacking or exciting the sound parts of the body for the purpose of relieving by derivation the diseased parts. Nature sometimes resorts to this method by establishing in certain chronic conditions a running sore or a fistula, which, if closed up surgically and not cured internally, i. e., by removing the cause, may soon lead to a death certificate. The allopathic method was monstrously in use in Hahnemann's day, venesection, purging, emesis, for example; hence the frequent appearance of the term, allopathic, in the older homeopathic literature. Nowadays the extra-homeopathic part of the medical profession, where they use drugs (many of them have, through bitter experience, become drug-nihilists) practise rather according to the antipathic law, which is a law, however limited in its scope.

Biochemic is a term not infrequently used. Biochemistry, or the chemistry of life, cell-life, is based upon the theory that disease is due to or permitted by a lack of certain tissue-salts which are normally present in the various cells: phosphates of lime, soda, potassium, of iron, of magnesia, the chlorides, sulfates, etc. Biochemistry, then, is a theory of cell-dietetics. It is a theory, not a law; but the indications furnished in its therapeutic system for the use of these tissue-salts so closely correspond with such homeopathic pathogeneses as exist, that their administration becomes practicable. But, if we consider that a biochemist negates the value of such remedies as belladonna, mercury, nux, lachesis, gelsemium, with their clear-cut indications, we perceive the limitations of theory, and are led to a deeper appreciation of inductive science and a law-governed therapeutics that holds within its grasp not only tissue-salts but every potent agent, and which metamorphoses poisons and toxins into implements of good service.

Another term may be alluded to finally, the term, isopathic (*isos*, the same; *pathos*, disease). There is no such thing as isopathy in therapeutics. If we use tuberculin in tuberculosis, we are not proceeding

isopathically but homeopathically, for we have made quantitative, if not qualitative, alterations. In the "Organon" (note, p. 42, Dudgeon) we find the familiar example of a frozen limb being restored to health by rubbing snow upon it. The isopaths claimed this as an example of isopathy; Hahnemann cites it as a homeopathic cure; it is actually antipathic (let us give the devil his due!), i. e., the cure takes place from the application of a mild degree of heat supplied by friction and the melting snow to the frozen part, and this gradually and safely allows the return of tissues to a normal condition.

We are now ready to enter upon a consideration of the theory or philosophy of homeopathy, or better expressed, the investigation of the laws and procedures governing the therapy of drug-substances used homeopathically.

#### *Hahnemann's "Organon"*

In the study of homeotherapeutics we naturally turn to the "Organon"—rarest of all phenomena, a medical work whose practical value time does not and cannot lessen. Treating as it does of that most recondite, intricate subject, the human organism, it rests upon the sure foundation of precise observation of nature, followed by an inductive logic whose conclusions are irresistible and stable as long as the human type which it considers remains the same. This statement does not, however, imply absolute perfection either in Hahnemann or his work, which after all is but a portion of the science of medicine. Nevertheless, the indiscreet (or very wise) old-school man, once caught in the cogwheels of its facts and logic, cannot well escape without losing whatever respect for scientific truth he may once have possessed. It may be allowed, though, that certain minds, even of brilliant endowment, cannot perceive truth in certain forms. An example is Dr. Oliver Wendell Holmes, who many years ago predicted the early disappearance of the homeopathic system of drug-therapy. Today the laboratories of the world are formulating in their technicology the homeopathic law. Simon of Paris (*Journal de Physiologie et de*

*Pathologie Generale*, Sept., 1903; *Archives de Medicine Experimentale et d'Anatomie Pathologique*, Nov., 1903) says, in investigating the method of operation of diphtheritic antitoxin, that "the pathologic modifications, which seem to evolve a little more rapidly in the rabbit than in man, are identical with those noted in benign diphtherias recovering spontaneously. It is the same evolution, but shortened. Judging from the blood examination, the serum creates a dwarf disease (*une petite maladie*, i. e., similar) which aborts." And Prof. von Behring, of antitoxin fame, has recently made the following curious statement:

*What Behring Says*

"The scientific principles of this new tuberculothrapy are yet to be established, just as the scientific principles of my antitoxic serum-therapy remain to be explained, notwithstanding the assertion by many authors that the therapeutic action of my diphtheria and tetanus antitoxins is clearly understood since the promulgation of Ehrlich's side-chain theory. For speculative minds the new curative substance will undoubtedly become a most interesting object of scientific investigation, but I do not believe that medicine will profit much by it. In spite of all scientific speculations and experiments regarding smallpox vaccination, Jenner's discovery remained an erratic block in medicine till the biochemically thinking Pasteur, devoid of all medical class-room knowledge, traced the origin of this therapeutic block to a principle which cannot better be characterized than by Hahnemann's word: '*homeopathic*.'

"Indeed, what else causes the epidemiological immunity in sheep, vaccinated against anthrax, than the influence previously exerted by a virus *similar* in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of this influence, exerted by a *similar* virus, than by Hahnemann's word: '*homeopathy*'?"

"I am touching here upon a subject anathematized till very recently by medical pedantry; but if I am to present these problems in historical illumination, dogmatic

imprecations must not deter me. They must no more deter me now than they did thirteen years ago, when I demonstrated before the Berlin Physiological Society the immunizing action of my tetanus antitoxin in infinitesimal dilution. On that occasion I also spoke of the production of serum by treating animals with a poison which acted the better the more it was diluted, and a clinician, who is still living, remonstrated with me, saying that such a remark ought not to be made publicly, since it was grist for the mill of homeopathy. I replied: Gentlemen: 'If I had set myself the task of rendering an incurable disease curable by artificial means, and should find that only the road of homeopathy led to my goal, I assure you, dogmatic considerations would never deter me from taking that road.'"

The words of a poet, other than Holmes, might aptly be quoted here:

The mills of God grind slowly, but they grind exceeding small;  
Though with patience He stands waiting, with exactness grinds He all.

The "*Organon*" is not impeccable. If rewritten by Hahnemann today there would be alterations, betterments, just as he changed the various editions of the book with a growing experience; but, in this regard consider the dark ages in which it was formulated; the venesection, pukings, purgations, polypharmacy, a therapeusis against which he lifted up a voice and which are not yet impotent.

Nowadays the best old-school prescribers use a single remedy and are willing to wait its action, whatever that may be, or else are content with the adjuvants of proper food, light, air, nursing, hygiene, leaving vitality to solve its own problems. Their textbooks have comparatively little to say on drug-therapy.

*The Ideals and Motives of Hahnemann*

Hahnemann was animated by two energies: First, the philanthropic, or love for his fellow men, an impulse, or dynamis, which characterizes all true physicians of whatever age or "school," and which is best expressed in the simple phrase, "they serve as best they may." This moral or heart-im-

pulse may be combined with a less or greater degree of intellectuality; in the case of Hahnemann, with the greatest intellectuality. and here we find the second irresistible impulse, or dynamis, which drove him onward, namely, the philosophic.

Philosophy is a much-abused and often little-understood term. Let us hark back to lexicography and define it. Philosophy is a knowledge of phenomena as explained by and resolved into causes and reasons, powers and laws. A philosopher, then, in any sphere is an inductive logician dealing only with facts but seeking and demanding with all the powers of a finite intellect the causes and reasons, powers and laws governing or related to these facts. Hence, we have Hahnemann, the philosopher, as distinguished from the medical theorizers whom he flays in the note to Section 1 of the "Organon." On the high and dusty shelves of medical libraries you may unearth thousands of these theories, and they are still in the process of accretion. Hahnemann's philosophy, however, remains a vitalizing and inexhaustible force, still the most perfect example of modern inductive science in the therapeutic domain.

Bearing, therefore, in mind the chiefest factor in the restoration of a diseased organism to health, namely the inherent vital force and tendency toward health or equilibrium; recognizing the utility and place of various remedial factors such as surgery, the therapeutics of light, heat, electricity and other agents; admitting also that there is an antipathic law governing the action of drugs, but generic in type and therefore of limited scope, we may proceed with the philosophy of homeotherapeusis, subdivided as follows:

1. Natural Disease.
2. Drug-disease, or Pathogenesis.
3. Primary and Secondary Symptoms.
4. Potency; Repetition of Dose; Alternation; Homeopathic Aggravation.
5. Acute Diseases.
6. Intermittent or Alternating Diseases.
7. Chronic Diseases: Psora, Syphilis, Sycosis.

1. *Natural Diseases*.—"The physician's high and only mission is to restore the sick

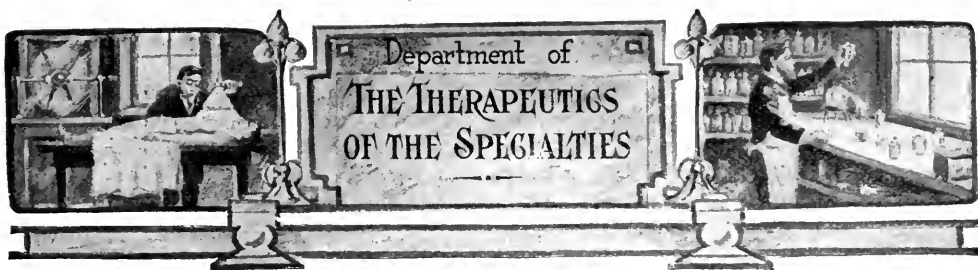
to health, to cure, as it is termed." Thus begins the "Organon." What constitutes sickness, and what is involved therein? . . . apparently simple questions which soon lead the careless thinker astray. For centuries disease was universally considered "as a thing separate from the living whole, from the organism and its animating vital force, "a devil to be exorcised, an entity to be purged out, sweated out, to be drawn off in the venesection's basin; and medicine pursued a devious, cruel and bloody path in its unphilosophic, unscientific endeavor to relieve.

The proximate cause of a disease, whether it be moral or corporeal, bacteriologic, telluric or atmospheric, is not absolutely the disease nor that totality whereupon the physician, confronted with an organism suffering from imbalance, concentrates the entirety of his homeopathically curative effort. A person suffering from tuberculosis, whose vital organs may be sown thick with tubercles, presents these as the proximate, or excitant, cause of his disease, but the primal cause lies in a receptivity acquired by ancestral or personal sins against the laws of his being. Preventive medicine is the aim of modern science, whereby these proximate causes may be removed from organisms of acquired or ancestral receptivity, thus, "leading them not into temptation," and it demands the cooperation of all physicians; but homeopathic science is peculiarly able to meet and combat the primal causes of disease under the most disadvantageous circumstances; and when the organism is restored, even approximately, to its pristine vigor, it exhibits marvelous defensive and offensive powers against infection.

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[This presents the case for homeopathy—the balance of the article appearing next month. As you all know, we are not homeopaths, yet we believe in giving the homeopath a hearing. But after this we will give "the other side" a chance to reply. This discussion is one that we can not continue indefinitely, so only one or two papers can be used. Who will submit *the best answer?*—ED.]

(To be continued)



## A VISIT TO THE MAYOS'S CLINIC

The story of a brief pilgrimage to Rochester, Minnesota, showing what is being accomplished by a brilliant group of American surgeons and physicians in an out-of-the-way country town

By W. F. CHURCH, M. D., Greeley, Colorado

TO be fully up to date it is now considered necessary to make a pilgrimage to Rochester, Minnesota, at present the Mecca of American Surgery, and there sit at the feet of the two Mayo brothers and marvel at their wonderful work. The idea that these men best represent the highest accomplishments in technic and results in American surgery seems to have pervaded the surgical mind of Europe, for famous surgeons across the Atlantic pass by the great medical centers of the East, or maybe just tarry briefly on their way to a small little-known city in the great Northwest.

### *The Mayo's Clinic the Chief Attraction*

Before the train reaches Rochester the casual observer will usually discover that a majority of the passengers are bound for that city. This is said to be the case on all trains, no matter from what direction. There are apparently few trains that do not bring a visiting surgeon and a number of patients to this town. The city of Rochester is no more attractive to the average traveler than hundreds of other towns with a population of from five to eight thousand, but it has the unique distinction of being made famous by two surgeons who are greater than their native city.

The Mayos are the chief benefactors of the city and its chief attraction. They have

stemmed and reversed the current of surgical cases setting toward the great cities and directed it toward their own little town. It has been no little task to prove to people that the highest skill can be found elsewhere than in a metropolis.

One of the first things to do on entering the town and registering at the Cook House, a hotel with excellent accommodations, was to learn the location of St. Mary's Hospital where the Mayos operate and the hour when work begins, which was found to be at eight o'clock in the morning.

### *St. Mary's Hospital and Its Operating Rooms*

St. Mary's Hospital is not particularly imposing in comparison with like institutions in large cities, but it is beautifully located at the west end of the city, the country ahead being not only pleasant to look upon but affording an abundance of untainted air. Its capacity is 180 beds, all used for surgical cases. The operating rooms, two in number, with a sterilizing room between, are located on the fourth, or top, floor, fronting to the north, so that light is quite uniform. An adjacent room is used as a waiting room by visiting surgeons. Here men from many sections of this country as well as Canada meet on common ground. They are all learners. Here is found the would-be sur-

geon, the man of moderate experience and the expert operator. Not one of them can go away without having gained information.

When preparations for an operation are completed a bell is touched to summon the visitors, who file into the room and mount the L-shaped platform made of steel with large connecting brass tubing for railing, furnishing two rows of seats, the rear considerably elevated above that in front. An excellent view is thus afforded of operations not performed in deep cavities. Both surgeons may be operating at the same time and the visitor may select the operation that he cares most to see performed. Most of the time, however, while one surgeon is operating, a patient is being prepared in the other operating room, so the visitor can, by passing first to one then the second and third room, witness from two-thirds to three-fourths of the operative work of both men. If all operations could be performed in the same length of time all could be witnessed, but a prolonged operation breaks the alternation.

#### *Method of Anesthesia*

In most, if not quite all, other hospitals in which I have witnessed the procedure it is the custom to anesthetize the patient in a room adjacent to the operating room. In St. Mary's Hospital the patient, if able, walks into the operating room, from which visitors are then excluded, and is thus given a chance to view the surroundings with the view of allaying trepidation and fear. Ether is the anesthetic of choice and is given by the drop-method by a trained nurse thoroughly versed in anesthetizing. Nurses are preferred to doctors for this work as they are less liable to neglect their work because of interest in the operation. This clinic is entitled to much praise for what it has done to popularize the drop-method of giving ether. In 1906 out of a total of 3915 operative cases ether was administered 3853 times.

#### *The Preparation of the Patient*

The work of scrubbing and preparing the patient is begun before the subject is fully

anesthetized, which probably serves to divert his mind from the ether. No elaborate preparations are made previous to entering the operating room. The night before the operation the patient is given 2 ounces of castor oil in a little beer and is also shaved and bathed. After he is placed on the table the field of operation is washed with warm water and soap, a gauze pad being used for scrubbing. The parts are then cleansed with a 1:2000 bichloride solution, after which a gauze sponge saturated with Harrington's solution is placed on the site of the incision for 30 seconds. After this is rinsed off with 70-percent alcohol and sterile towels have been placed and secured on all sides of the field the operation is begun.

Every visitor not previously instructed and not knowing what to expect is astonished at the amount of work done. It seemed to be a very common experience to operate on 20 patients in a day. One day I saw 23 cases posted for operation. In 1907 there were 4811 operative cases in the hospital, an increase of nearly 900 over the number of the previous year. According to one visiting surgeon who had come to Rochester several times the clinic had doubled since his first visit of five or six years ago. It must be borne in mind that while other surgeons operate two or three days in the week the Mayo brothers operate six days in the week. I did not learn whether they stopped for holidays.

#### *The Class of Operations*

There is a great variety of operations, covering in a year's time nearly the entire broad field of major surgery. The results of operations on the gall-bladder and biliary ducts, partial gastrectomies and gastrojejunostomies and extirpation of the prostate and thyroid glands have perhaps attracted the greatest attention of the surgical world. Doctors come long distances for operations on themselves. I saw an ex-president of the Ohio state medical society who was recovering nicely from a bile-duct operation, and a surgeon from central New York who was convalescing from an operation in the same locality, while a Kentuckian (born in Virginia)



was waiting for the final decision in diagnosis.

As nearly all of the patients are able to come to Rochester by train and some of them long distances, it can readily be understood that only a small minority are in an acute stage of disease. Out of quite a number of appendectomies I saw only one that had pus. Evidently the fulminating or gangrenous forms are rarely met with. The surgeon who meets with acute cases in every stage cannot hope to attain the percentage of recoveries reported on operations between attacks. In St. Mary's Hospital clean cases of appendicitis are allowed to leave on the eighth day, while gall-bladder cases leave about the eleventh to the fourteenth day. Surprisingly quick results has been a distinctive feature of the surgery done at Rochester.

The daily operative work is usually not completed until one to two o'clock in the afternoon, when everybody is tired or at least slightly fatigued. Taking my own feelings as a cue I wondered how the operators felt.

#### *The Surgeons and their Diagnostic Staff*

It does not take one long to learn that the celebrated surgeons have their offices only a block away from the hotel and that. Drs. W. J. Mayo, C. H. Mayo, Judd, Graham and Plummer are the members of a firm equipped to combat any disease on earth. Drs. Graham and Plummer are internists. The firm, so I understand, employ a corps of about twenty physicians, largely for the purpose of diagnosis. On reaching Rochester it is necessary for a patient to go to the office and register, when his case is taken under consideration. It may be two days or two weeks before a final decision is reached. The number of people was a surprise to the uninitiated. I was told by one of the employees that some days there were two or three hundred in attendance for consultation. It must not be understood that these are all new patients for some must come for several days before an operation is decided upon. Since last summer there were at least a thousand

new patients each month. Of this number only about two out of five were finally operated upon.

It is well known that a man may be a good operator but a poor diagnostician, and the time spent in operating is very short compared with the time spent in diagnosis. With their trained assistants the Mayos are able to employ all known methods of arriving at a conclusion. If the benignancy of a tumor incised in the operating room is doubtful the expert pathologist reports in a few minutes and operative procedure is carried out as needed. One stops to wonder whether a lone surgeon can compete with such a trained body of men, and one also wonders what would happen if capitalists should decide to start a great institution and employ experts in every line and highly trained operators. Medical journals might have something to say about surgical trusts. Of late the small hospital and the occasional operator have been gaining ground. Which system will gain the greatest headway during the next decade?

I asked a surgeon who had spent some time at Rochester and who further claimed the honor of having visited the chief clinics of this country and Europe what he thought of the clinic at St. Mary's. "The finest in the world," he replied.

I do not care to dispute his statement. If there is any place in this country and Europe where more or better surgery can be seen than at Rochester in a week's time I do not know where it can be found.

The visitor to Rochester cannot soon forget the courtesy extended him in being permitted to witness such fine examples of surgical art.

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[The remarkable success of the Mayos's clinic, so it seems to the writer, must be ascribed in part at least to the wonderful organization of its clinical and diagnostic staff and the perfection of detail with which it is enabled to grapple with every problem, so that the element of guesswork is eliminated so far as this is possible, *before* the operation instead of *after* it. In other words' this institution is a triumph of co-

operation. What this group of physicians has succeeded in doing by working together to a common end, other physicians can do, even on a smaller scale. In our opinion this article emphasizes the possibilities of such a division of labor as is proposed in

Dr. Gordon G. Burdick's scheme of "Medical Partnership," about which he told us in last month's *CLINICAL MEDICINE*. The subject is, we believe, a most important one. We should like to have a discussion of it by the "family."—ED.]

## A CASE OF SELF-CASTRATION

An interesting description of a case of self-mutilation, the patient being a religious zealot. The method of treatment pursued

By A. E. A. MUMMERY, M. D., Saline, Michigan

**M**R. L. T., age 24, married; occupation, rural mail-carrier. First call, Nov. 6, 1907, 11:10 p. m. Found patient in a semiconscious condition due to loss of blood; no radial pulse; heart action, 130; temperature, 97.4 ° F. He was lying in a pool of blood coming from a wound in the scrotum, caused by removal of the left testicle, the cord being cut within the tunica vaginalis.

I immediately applied pressure over the cord in the pubic region, and after removing clots with the finger, I caught and tied the vessels with chromicized catgut. The sac was then irrigated with hot 1:1000 solution of alphazone. The active hemorrhage being controlled, the cavity was packed with 10-percent iodoform gauze, and a tight bandage applied. The heart was stimulated with 1-60 grain strychnine sulphate, hypodermically, and pain controlled with one hyoscine-morphine-cactin tablet. A normal salt enema was also given. Hot-water-bottles were applied, and in an hour the enema was repeated, the patient's condition improving. Pulse, 114 and stronger, and the temperature 98° F.

In two hours, heart action still improving and patient asleep. At 6 a. m., pulse 100, temperature, 99.2° F. Patient feeling stronger. Patient put on liquid diet. At 4:30 p. m., pulse 94, temperature, 99.4° F. Having rested well during the day, the patient was stronger and in good spirits, but com-

plained of some pain. Nov. 8., 9:30 a. m. pulse 87, temperature, 99.1° F. Dressings were removed and the wound was irrigated with alphazone, 1:2000, and packed with iodoform gauze. There were no signs of infection as yet, but great ecchymosis of the parts. The irrigations and packing were repeated daily, diminishing the quantity of gauze each time until the eighth day, when it was unnecessary. There being a slight amount of pus on the ninth day the wound was irrigated and wiped out with 96-percent carbolic acid. An uneventful recovery followed.

The circumstances which brought about this deed are as follows: His wife, being pregnant, sexual intercourse became very distasteful to her. When young he had formed the habit of masturbation, due chiefly to a long, tight foreskin, and he now resorted to this way of satisfying his passion. Being a zealous church member and reader (not student) of the Bible, he read of the condemnation of Onan, and worried about himself. He read the passage in Matthew 18: 8-9, "If thy hand or thy foot offend thee, cut them off," etc., "If thine eye offend thee, pluck it out," etc. After due consideration he decided to rid himself of the offending parts. Being left alone for a few days he carried out his intention, at about nine in the morning, by using a razor, but after removing the left testicle he became alarmed at the hemorrhage, which

prevented him from unsexing himself completely. At 10:30 p. m., feeling faint, he went to the home of his aunt about ten rods distant and had her call his wife and my-

self. They immediately placed him in bed, where I found him. I have advised a close circumcision, which will be performed in a short time.

## TREATING THORACIC SARCOMA

A severe and necessarily fatal case of this malignant disease, showing what may be accomplished by treatment, even here

By F. G. De STONE, M. D., San Francisco, California

THOUGH I know it is not the rare cases you most desire for publication in your journal, the following case has interested me so much that I cannot refrain from letting others know about it. Besides, it has a remote bearing on the call you made in July CLINICAL MEDICINE, asking for expressions from readers as to what should be omitted from the journal to make room for a correspondence course. To this I will refer later.

### *The History of the Case*

May 15 I was called to see a Mr. W., finding a man 65 years of age, of medium height. His face presented the ashen-yellow color of malignant disease; his large, wide-nostriled nose was of the deep-purplish red of a chronic alcoholic, with distended venules; the skin of the cheeks also was flushed and at times cyanotic, giving the impression of chronic hepatic engorgement. (These signs became all the more confusing when I learned the man committed no excesses in eating and never drank liquors.) The finger-nails, and even the toe-nails, were remarkably clubbed, indeed more so than most victims of phthisis, yet there was no evidence of this disease. At all times the hands were cyanosed, with purple nails, yet there was no dropsical swelling. His respirations were hurried and labored, and never can I forget the look of anguish on his countenance, his eyes roved restlessly about with a wild, haunted look, and almost the first words he spoke were, "Oh!

Doctor, can't you do something to stop this awful pain?" I assured him I could, but when I learned he had been taking codeine pills in 2-grain doses for months, I did not feel so sure of my statement.

### *The Physical Examination*

Inspection showed a large tumor to the left of the sternum, extending from the lower border of the clavicle below almost to the nipple and latterly almost to the head of the humerus. Immediately below the clavicle and toward the clavicular notch it was somewhat pointed, and the apex softened enough to dent on pressure.

Inspection also showed the most marked transmitted pulse I have ever seen, the pulsation appearing about one inch above the navel and could readily be seen twenty feet away; indeed I at first suspected aneurism of the abdominal aorta, but the most rigid examination failed to discover such. (I will show why it was so marked, later on.)

Percussion showed absolute solidity of the upper left lobe of the lung, and I concluded correctly that the tumor involved the whole lobe, although a prominent specialist had advised operation, stating the tumor was external to the thoracic wall. Autopsy subsequently showed my inference correct. Neither could I make out the area of heart dulness, which puzzled me greatly. At times I believed the heart to have been misplaced downward, thus accounting for the pulsation below, but it was not, being found in correct position.

The liver, though somewhat large, presented no abnormalities externally, and examination of the feces showed it performed its proper function.

The pulse was strong though intermittent at times, yet it was otherwise normal and remained strong till the end. Repeated examination of the urine showed it to be perfectly normal. The tumor on pressure gave forth the peculiar crepitant feel so common in sarcoma.

#### *The Blood Findings and Treatment*

Dr. Charles Clark was called in to make a blood analysis, and as he has kindly agreed to give a description of his findings here as well as in the subsequent autopsy, I shall only state here that the count showed something below 3,000,000 red corpuscles, and they were almost devoid of hemoglobin, being mere rings of color, and out of many slides only one transitional cell was found.

On this finding I informed the family that I had little hope of doing more than to relieve his suffering till the end came, and as they were thoroughly satisfied with my handling of the case, as was also the patient, I was retained till the end came two months later. And I hope I shall never have another such case, for the man himself was one of the most unassuming, kindest, uncomplaining patients I have ever seen, when bearing as he did, the agonies of the damned as he had done for upward of a year, and to realize I could not help him, as each day I came he would ask me what progress I was making, was one of the hardest experiences I have had to meet in fifteen years of practice, though I did have the satisfaction of relieving him of pain after the first three weeks.

I began the use of trypsin and amylopsin in the hope of relieving the pain, and rapidly ran the trypsin up to one ampulla daily, and two of amylopsin, and by the end of three weeks was giving two of each; but as no effect save severe nausea and derangement of digestion, with no abatement of pain (from the latter he was only free when almost unconscious from morphine), I discarded the treatment and resolved to try strychnine and morphine, as suggested by

Dr. Seba in *Ellingwood's Therapeutist* for March. I gave him strychnine nitrate, gr. 1-30, t. i. d., morphine, gr. 1-4, and cactin, gr. 1-6. As he stood it well, even improving in appetite, I increased it rapidly until he was taking gr. 1-8 altogether of the strychnine daily. By this time the pain had almost entirely disappeared and the physiologic action of the strychnine was marked. The dose was then reduced enough to hold him within the bound of that action, and then withdrawal of the morphine, till the last three weeks no morphine was given. Yet no pain was complained of and the patient, though weak, remained rational till the last.

He passed away July 11, and Dr. Charles Clark assisted me in the autopsy as did also my nurse and wife. My wife has drawn a cut of our finding that may be of aid in understanding the most remarkable feature of the case, which was the fact that the man had no stomach.

Where the esophagus should enter the stomach was a slightly sacculated pouch not as large as some of the dilations of the colon, and from this led a curving horseshoe-shaped gut not larger than the normal duodenum, this curved down at an oblique angle, and what should have been the pylorus, terminated in the commencement of the duodenum about opposite the navel. The head of the pancreas was left entirely bare and seemed to be normal, the space containing the celiac axis, and the foramen of Winslow was covered only by the wall of the abdomen, and this space was fully as large as a man's hand. In this space could plainly be seen the abdominal aorta, bare for several inches, and also the vena cava. This fact explained partly the singular plainness of the transmitted pulse, and I conceive it probable that the extreme hardness of the upper lung-lobe, with its many adhesions to the thoracic wall, prevented the heart from giving the usual apex-beat, as it could not be detected in its proper place.

His family stated that his appetite was always poor and that he was never a drinking man. As his daughter expressed it, "He did not eat enough to keep a bird alive;" which can readily be understood from the

fact that the pouch could not contain more than half a pint.

The liver was very large, weighing at least six or eight pounds, and both it and the spleen was riddled with infarcts; but as stated before, Dr. Clark will describe the tumor and the microscopic findings, which follows:

#### MICROSCOPICAL REPORT AND REMARKS

On May 23 I was called to make a complete examination of the blood of a Mr. W., by Dr. De Stone, with the following results:

Red blood-corpuscles, 2,892,000 per Ccm.; white blood-corpuscles, 7200 per Ccm.; hemoglobin, 60 percent.

Differential count of white blood-corpuscles showed the following: Polynuclear neutrophils, 83; large lymphocytes, 8; small lymphocytes, 7; eosinophiles, 1; transitional, 1.

In counting over 500 white corpuscles only two transitional cells were observed.

The red blood-corpuscles showed extreme loss of hemoglobin, this being represented by a narrow ring of stained material.

Some two months later I was requested to assist at the postmortem examination of this same patient.

The subject was extremely emaciated and presented as a striking feature a large hemispherical growth occupying the entire upper left quadrant of the thorax. The growth was approximately 4 inches in diameter and projected 2 1-2 inches above the surrounding tissues. Palpation developed the fact that the growth was quite firm, with the exception of several softened areas.

On making the usual postmortem incision and attempting to dissect off the skin over the tumor, I observed that it was generally free, with one or two exceptions, and on attempting to loosen it at these places, one of the softened foci was opened and a quantity of thin grumous material was discharged.

The pectoralis major muscle was found to overlay most of the lower portion of the tumor, but its upper portion as well as the pectoralis minor were incorporated in the tumor mass.

On dissecting off the soft tissues it was found that the sternal end of the clavicle, the upper half of the sternum extending beyond its median line—the costal cartilages and anterior extremities of the first, second, third and fourth ribs were incorporated in the growth—in fact infiltrated by it.

Exploration of the thoracic cavity showed that the growth had also extended through the chest-wall and involved the pleura and almost the entire upper lobe of the left lung—even destroying it clear to the apex.

The left pleural cavity contained quite a quantity of pleuritic fluid. The right lung and heart were macroscopically normal.

Examination of the abdominal contents showed several of the organs to be abnormal.

The stomach was extremely atrophied, being represented by a section of intestine about the size of the normal duodenum—with the exception of a pouch about 2 inches long and possibly 1 1-2 inches

in diameter, located at the site of the normal cardiac extremity. The organ, generally speaking, was much depressed, occupying a position on a level with the umbilicus.

The liver was enlarged, and studded over its surface were a number of small pearly white nodules from a sixteenth to an eighth of an inch in diameter.

The kidneys were apparently normal as to size and color, but on the upper portion of the right was a small cyst one-eighth inch in diameter.

The spleen was of normal size and consistency, but its surface was thickly studded with nodules similar to those found on the liver.

I prepared microscopical sections of the tumor and affected organs which show the tumor to have been a sarcoma. The cells were both of the round and spindle varieties, the former predominating. Sections taken from the growing edge of the tumor within the chest and next to the lung-tissue have an appearance very similar to that of a carcinoma, showing well-defined cell groups separated by trabeculae of fibrous tissue.

While the gross appearance of the kidneys was normal—sections show the existence of a low-grade nephritis, as the intertubular connective tissue was noticeably increased and many of the tubules presented no cellular lining. A number of small retention-cysts also were noticed. The comparatively large cyst already mentioned was found to have a wall composed of a single layer of cuboidal epithelium and in the cavity was considerable granular detritus and pigment as from an old hemorrhage.

The small nodules on the spleen and liver were found to consist almost entirely of fibrous tissue with a very few small round cells scattered throughout, while next to the parenchyma of the organs was a narrow band containing pigment-granules. Otherwise the organs appeared to be normal.

CHARLES CLARK, M. D.

#### Concluding Remarks

Now for the bearing on the question you have asked THE CLINIC readers:

1. The Editorials. I do not believe any of the "family" would listen to the omission of one of the leading articles: who can estimate the good done in the splendid series on the liver last year by Dr. Abbott, or how many of us who take a pride in physiology were not helped by the article on vasodilation by Dr. Waugh, this year; and, again, is there ever a month that Dr. Robinson does not have some helpful suggestion on venereal disease; and the other lads—Butler, Kerby, Shaller, etc. I cannot name them all, but I get great good from each of them. No! we need these in our business. The editorial department that gives us an "eye-opener" as to what the "other fellers" all over the world are doing—we want that. Then there are the "Nuggets" that gives us a quick cue

for a long run on some pesky thing that has worried. We will not drop them.

Next we come to the "Miscellany," and here is where THE CLINIC shines, for as the eye runs down that list it is almost certain to find one or more subjects that tell just what will do for that puzzling pruritus, hemorrhoids, gleet, gonorrhea, neuralgia, or rheumatism, or what not, and the "man" needs it quickly and does not have to read a week to get a bald fact. This latter subject is what I wanted to mention in regard to my case. The short article by Dr. Leba in Ellingwood's journal just made it possible for me to help this one patient over the "divide" without pain and was worth

many times the price of the journal. *Not* NO! Don't cut out any of THE CLINIC.

Why not give us the correspondence course in pamphlet form and charge us a dollar or so for it? If every doctor that reads THE CLINIC is not ready to do so I miss my estimate of them entirely.

As this article was written last July, the call you made as to expressions in regard to omitting certain parts of THE CLINIC to make room for a postgraduate course is now not relevant to the subject as you have already decided on your course; hence you may use your own judgment as to incorporating it with this article.

## OVARIAN ABSCESS CURED BY ASPIRATION

A severe case of this disease in which the symptoms were pressing, in which drainage was made through the abdominal wall, resulting in complete cure

By GEORGE H. TICHENOR, JR., A. B., M. D., New Orleans, Louisiana

Former Yellow-Fever Expert, Louisiana State Board of Health; Member of the Association of Medical Officers of the Army and Navy of the Confederacy

**M**ORE than two years ago I was called hurriedly to see a case of ovarian abscess which was about to rupture and the attending physician had decided to operate at once.

The following symptoms were present: Violent chills followed by fever, with profuse sweating. The fever did not differ essentially from that of abscess elsewhere, running the regular characteristic course. The woman complained of a feeling of prostration, with throbbing pain in the left ovary, pressure upon the rectum and bladder, and sometimes interference with urination. There were severe pains down the left thigh.

Abdominal palpation with rectal and vaginal touch revealed a fluctuating tumor about to discharge. Being afraid that in the effort of moving her to the hospital the abscess would rupture unfavorably, and as there was no time to lose, I suggested the

old method of aspiration through the abdominal wall, which was done.

After the removal of a large quantity of pus, a drainage tube was inserted and remained *in situ* until the discharge ceased, which occurred about the seventh day. The wound was allowed to remain open and it closed without the use of any antiseptics. The bowels were kept open with saline purgatives. Uterine and ovarian tonics and sedatives were given. There was a complete recovery and this year she gave birth to a fine boy.

The object of this paper is merely for the purpose of statistics, and to encourage the use of some of the older methods which still serve as very valuable aids in modern surgery. If I had been familiar with Buckley's alkaloidal tonic combination for uterine troubles, I believe I should have gotten even quicker results.

# PUERPERAL SEPTIGEMIA TREATED AND CURED

A severe case of puerperal sapremia, caused by retention of placental tissue, and the method of treatment which gave success

By A. W. THOMAS, M. D., Trenton, Tennessee

ON the night of February 19, 1908, I was called to see a patient living about three miles from the town of Trenton, in the state of Tennessee, in a very dilapidated looking building. It was one of those cold winter nights with a "north-wester" blowing lightly and a little snow falling, just enough to remind one that winter is yet here.

On arrival at the patient's home I found her in a very excited and half maniacal condition. She could not talk sensibly, that is, I could not get any sense out of what she was saying or trying to say, therefore I tried to gather something about the case from a woman who appeared to have been waiting on her.

*History of the Case.*—Three days previous to the time I was called she gave birth to a boy, and during her confinement she had a "granny" who acted as her *accoucheur*. No trouble took place in the delivery of the child, they said, but the expulsion of the placenta was difficult and took a rather long time.

*Examination of the Patient.*—Between her spells of excitement I succeeded in taking her pulse and temperature; the temperature registered 106° F. at that time, and there was a quick, bounding pulse (which later on became rather feeble, as a result perhaps of the rapidity with which the disease was traveling). She complained of being rather chilly and cold now and then, and often she would shiver. Sometimes she would become quite drowsy and a little later burst into a fit of excitement, jump out of bed, try to go out of doors, etc.

Right here permit me to say that on entering the room I detected a rather peculiar foul odor (which most medical men would detect who have cultivated olfactories)

which readily led me to think this a case of puerperal septicemia. I then made a vaginal examination and found that the womb was giving off a rather dark-colored, frothy, pus-like fluid with a very disagreeable smell (far different from the lochia of a normal birth).

*Treatment of the Case.*—As I have already stated that, on entering the house, I was greeted with a very excited patient, I immediately proceeded to quiet her and succeeded very easily by giving two granules, hypodermically, of cicutine hydrobromide. She remained quiet during the remaining part of her illness.

Having succeeded in quieting her my next procedure was to get down to the seat of the trouble and remove it, and I did this by dilating the os uteri, thoroughly cureting its cavity, then thoroughly douching out the organ with a hot normal salt solution, using about two gallons of that fluid.

In order to accomplish this I put my patient to sleep by using hyoscine, morphine and cactin hypodermically. Bear in mind that she already had two granules of cicutine, so she did not require much of the hypodermic anesthetic. What I used did the work without a hitch.

In passing let me say right here that the cause of the trouble was retention of part of the placenta, which was not expelled, due probably to uterine inertia, also to the unclean hands of the old "granny."

For the fever I gave her the defervescent compound, consisting of aconitine, digitalin and veratrine, one granule every fifteen minutes for twelve doses, then one every half hour. By the use of these excellent granules I succeeded in bringing down the temperature to 100° F. in twelve hours. For the septic condition I gave her one

tablet each of echinacea, 1-2 grain, and calcium sulphide, 1-6 grain, every hour. The defervescent compound acted nicely, both for the reduction of the fever, as well as helping to eliminate the septic material from the system, through the veratrine they contain.

For the alimentary canal I gave her 1-10 grain calomel with aromatics, dissolved on the tongue, every hour until her bowels moved, then I followed with a teaspoonful of effervescent saline laxative and continued to give her a teaspoonful of that laxative every morning till I gave up the case as cured.

For the restoration of her strength I ordered to be given her an "egg-nog" now and then, custard, a little chicken broth, some beef tea and so forth. Her appetite at first was rather feeble, but with three

granules of strychnine arsenate three times a day after meals (which acted as a tonic as well as increased the red blood-corpuscles) she rapidly acquired a good appetite, her natural color returned, in place of that of an anemic appearance, and now she is well enough to be about the house.

This case, after I was called in up to the time I discharged the patient, lasted just fourteen days.

[A very interesting case, treated in a most rational manner. As the doctor says, it was undoubtedly due to the retention of placental tissue, which was decomposed as a result of infection with putrefactive bacteria. Such a case should more properly be called "sapremia" rather than "septicemia," though the latter term is often used to cover all these cases of "blood poisoning."—ED.]

## TREATMENT OF SEPTIC PAROTIDITIS

A comment upon previous articles dealing with this disease, suggesting a medicinal line of treatment which the author believes should prove useful

By WILLIAM LAMBERT, M. D., La Crosse, Wisconsin

THE article on "Fatal Parotiditis Following Labor" by Dr. W. C. Bateman, of Zanesville, Ohio, has interested me very much as has also one on "Septic Parotiditis as a Complication of Abdominal and Pelvic Surgery" which appeared some months ago in *The Columbus Medical Journal* from the pen of Dr. Emory Lanphear, of St. Louis. Both are of importance from a clinical standpoint, but it seems to me that each of the authors has failed to give that prominence to internal medication which should have been given. The pathology as stated by Lanphear is no doubt correct; his ideas are in harmony with mine in that particular, but in the matter of treatment we do not agree.

In every form of sepsis after the poison has been taken into the circulation, a certain rigidity gives way to perfect relaxation,

which in turn facilitates further absorption and unless we can close up the capillaries and as far as possible render the blood aseptic our patient will succumb to the infection. Nothing is better in such cases than ergot, potassium chlorate and echinacea. In cases such as described by these writers it would be best to give 10 drops of potassium chlorate and 15 drops of echinacea (specific tincture preferred) every hour.

After tonicity has been produced the frequency of the dosage should be reduced to two, then three and finally four hours until the general conditions have improved satisfactorily.

In cases following confinement this plan of internal medication must be continued, in connection with local measures such as irrigations, etc., until the lochial discharge is normal in quantity and quality. In most



cases the sepsis may thus successfully be combated and the patient be carried to a rapid recovery.

[We are glad to give due prominence to the possibilities of internal medication in the treatment of this disease, and we shall be

pleased to have reports from other members of the "family" who possibly may have had experience with it. In our own experience, septic cases of all kinds receive benefit from "clean-up" medication with echinacea and calcium sulphide to combat the germ-trouble.—ED.]

## ::: SURGICAL THERAPEUTICS :::

### LEUKOCYTOSIS

This is becoming of much importance in surgical and gynecological work. The word is now used to mean an abnormal increase in the leukocyte-count, but never to the enormous extent found in leukemia. The increase, too, is due to a different cell from that in leukemia, viz., the polynuclear, which forms from 62 percent to 70 percent of the white cells in normal blood. The polynuclear leukocytes are increased in purulent processes, tumors (benign and malignant) and septic conditions. The special value of the leukocyte-count is in determining the presence of a suppurative process. By a marked increase-leukocytosis one may tell if an appendicitis is ending in suppuration (operation is advisable when the count is above 20,000.) But it must be remembered that the amount of the leukocytosis is not dependent upon the amount of pus alone, but other factors must be taken into consideration, as the severity of the infection and the resistance of the patient. A high count might indicate a severe infection with good resistance, while a severe infection with poor resistance might show a light count or absence of leukocytosis. Again if the abscess is well walled off, and the process a chronic one, the leukocyte-count might not indicate the amount of pus present.

### QUINSY

When an inflammation of the tonsil goes on to suppuration in the depths of the gland or in the connective tissue behind it, the irritating gargles so much used for phar-

ngitis and tonsillitis should be abandoned, hot, mildly saline solutions being substituted therefor. Before suppuration occurs sodium salicylate in half-gram (8 grains) doses every two or three hours is an aid in the abortive treatment, but it should not be continued after pus-formation is evident, as it debilitates the patient. As the inflammation progresses and pain becomes severe, 50 centigrams (3-4 grain) of codeine may be given every two or three hours; and hot applications made at the angle of the jaw. As soon as pus forms, it should be evacuated—there is danger in delay. The tonsil should be thoroughly swabbed with a cocaine solution, and punctures made with a sharp knife in what appears to be the abscess. If pus is not reached (which is more than probable at the first effort) some relief is always experienced even from the slight loss of blood which these punctures entail. In a few hours, again with cocaine, other punctures may be made; and when the abscess is opened freely as much pus as possible must be pressed out. After the evacuation of the abscess relief is immediate, but warm, mildly antiseptic gargles should be continued at intervals throughout the convalescence. After the swelling has subsided a tonic containing iron is generally indicated for the associated debility.

### SERUM TREATMENT OF TETANUS

In lockjaw, after thorough cauterization of the wound and providing freest possible drainage, the antiseptic serum should be injected. Preferably this should be done into the subarachnoid space or brain-

substance through a minute trephine-hole; but usually the patient or friends will not permit; next-best is lumbar puncture with injection into the spinal canal; least beneficial are subcutaneous injections. In every suspicious wound (like that from the toy-pistol) one should not wait for trismus, but the injection should be made as soon as possible after the accident; even if one is called to a patient with a suppurating, tortuous wound forty-eight hours to three days after the accident the same injection should be made, because, even if the effect upon the toxins is not so great, fewer cells will be destroyed. Whenever a wound has possibly come in contact with horse-manure, the injection should be made if, on account of a tortuous wound, one is not certain of his ability to obtain rigorous disinfection. In both of these classes of wounds, or in any other in which there is the least suspicion of tetanus, the injection of the antitetanic serum should be repeated two or three times at an interval of eight days if the wound should continue to suppurate. It must be as recently prepared as it is possible to procure.

#### SUPPURATIVE PAROTIDITIS

As soon as one is fairly assured that pus is forming in inflammation of the parotid gland there should be no hesitancy about making free incision. The old plan was to allow the abscess to develop to such size that it would open spontaneously through the mouth or opened so that it would empty that way. Now we know the great danger of permitting the suppurative process to proceed uninterrupted and open it from behind the jaw as soon as the presence of pus is fairly sure.

#### TUBERCULOUS PERITONITIS

Bussi's treatment of tuberculous peritonitis, purely medicinal, is said to give excellent results in some cases which cannot be subjected to operation. In this the abdomen is tapped and the effusion drawn off and the whole anterior wall is then painted

with iodine and guaiacol. Hypodermic injections of the following are given.

Iodine .....	1.0
Potassium iodide.....	10.0
Guaiacol .....	20.0
Glycerin .....	80.0

Iodized gelatin may be given by mouth later. All surgeons now believe iodine to have a remarkable specific effect in tuberculous processes. A recent plan of treatment has yielded excellent results; it consists in tapping the abdomen and the introduction of heated air, with application of a bandage giving some compression, and the internal administration of iodized gelatin.

#### PLEURITIS WITH EFFUSION

Experience demonstrates that in pleuritic effusion it is far better to aspirate early than late, local measures and internal medication being of little value unless giving immediate results, save in very small collections of serum. As a broad rule it may be said that removal of the fluid as soon as it can be detected is indicated in every case of primary pleurisy. And in secondary effusions early evacuation is advisable, particularly in the latter stages of myocardial insufficiency. It is best always to have the patient in the recumbent or semirecumbent position, and cease withdrawing the fluid when the symptoms of faintness come on, repeating the procedure if necessary for the complete emptying of the chest. A local anesthetic may be used; with a strong stimulant, such as 2 ounces of whisky, a few minutes before operation.

#### NON-OPERATIVE TREATMENT OF LUPUS

Patients who are reluctant or unable to go to hospital for operation for treatment of lupus may be chloroformed and the entire affected area thoroughly burned out with the Paquelin cautery, which is far better than chemical caustics. Many however will not submit to even this procedure. Such may be treated by the Dreuw method, thus: The lupus-patch which is to be treated is frozen by means of ethyl chloride

(or by carbonic acid gas if a deeper effect is desired) until it is snow-white. Over this frozen surface crude hydrochloric acid is rubbed thoroughly and with a certain degree of force. According to Unna it is advantageous to saturate this crude hydrochloric acid with chlorine. The acid is applied in the following way: Absorbent cotton is wound around one end of a small wooden stick of about the size of a penholder; this is dipped in the crude hydrochloric acid and rubbed on the frozen surface, pressing slightly, till the nodules become of a grayish white color. (Reaction.) The grayish white color occurs first where nodules are, and then in the skin surrounding the nodules. In this way a large surface can be treated at once by a succession of applications of the caustic; but to be effective the acid must be energetically rubbed in. This freezing and cauterization is especially suitable (1) in lupus multiplex and lupus exulcerans; (2) in lupus of the mucous membranes, the nasal cavities, the lips, and tuberculous abscesses and fistula. (Cauterize from six to eight times in rapid succession.) But when freezing is not well borne by the patient (e. g., nervous and sensitive patients) or where very energetic cauterization is necessary, as in tuberculous ulcers, lupus hypertrophicus and verrucosus, then general anesthesia is necessary. The advantages of this method are as follows: (1) The method is simple, cheap, rapidly effective, and gives good cosmetic results.

(2) It can be carried out at home without hospital treatment, which is especially important for patients of limited means. (3) Complicated apparatus is not necessary, therefore the method can be applied by any doctor. (4) The method can be applied in all forms of lupus and in all situations, with the exception, perhaps, of the eye. Favorable results are as a rule obtained by repeated cauterization, even in far-advanced cases, especially in lupus of the nasal cavity.

#### HEMORRHAGE FROM BONE

When a broken or cut bone persists in bleeding, the point of a hemostatic forceps or other blunt instrument may be punched into the bone at the point where the vessel shows. If this does not stop the oozing or spurting, a little bit of muscle or of fascia, or even skin may be clipped off and used as a plug, the fragments being tamped into the little vascular openings so tightly as to occlude the vessels—a sort of artificial thrombus in each open artery or vein. By firm pressure with the finger or some flat instrument for a half minute or more even large vessels may be permanently occluded in this way. The obvious advantages are that material is always accessible during the operation, it does not require special preparation, it acts as a foreign body, but more like a blood-clot, and it seems to be always efficient.

## GYNECOLOGICAL THERAPEUTICS

#### KRAUROSIS VULVÆ

As old age comes on the vulva may undergo a hardening, or drying, with shrinking of the skin of the external genitalia, accompanied by great tenderness, the senile atrophy being associated with contraction of the vulvar orifice. It was first described by Briesky under the name "progressive atrophy of the nymphæ and vestibule;" but the name

kraurosis is now generally used. Lawson Tait mentioned it as occurring at or immediately after the menopause; but Briesky's cases were in pregnant women close to the climacteric. In this disease the vulva becomes smooth, pale and tender, with irritable, red patches on the remnants of hymen and the vestibule, with urethral caruncle prominent and excessively tender; later there is dryness and lack of elasticity of the vulva,

which becomes almost as white as if touched with pure phenol, with fissures here and there. Little nodules may be felt. The hair of the pubes has generally disappeared; that of the vulva is coarse and broken. At last the labia almost entirely disappear, so complete is the atrophy, the mucous membrane becoming smooth and pale and the introitus so small and tender as not to admit the finger for examination. Pruritus is sometimes extremely annoying and is most often the reason for seeking the service of a gynecologist. In the very last stage pain and tenderness disappear, the parts becoming totally insensitive. Nothing in the way of local applications seems to do good. Burning with the Paquelin cautery cures some patients. Others are relieved only by excision of all of the affected parts.

#### LACERATED PERINEUM

It is well always to bear in mind, in discussing with patients the advisability of submitting to secondary perineorrhaphy, that as a result of a lacerated perineum the woman will not only suffer the discomfort of the pelvic ptosis which accompanies it, but on account of the cystocele will be unable to empty her bladder completely. The residual urine will cause cystitis, followed by suppurative changes, the infection finally finding its way through the ureters to the kidneys. Thus a lacerated perineum may be indirectly the cause of death.

#### ELEPHANTIASIS OF VULVA

In the tropics elephantiasis attacks the vulva of woman, though not as frequently as the scrotum of man. Rarely it is seen in Europe and North America. It is totally different from hyper trophy (or overgrowth) of labia or clitoris—by some writers designated as “spurious elephantiasis.” It depends exclusively upon blocking of the lymphatics of the labia by the *filaria sanguinis hominis*, which can be demonstrated in the blood early in the disease. There is no ulceration as in esthiomene, but a steady, constant enlargement until the parts may

attain immense proportions—the surface presenting an irregular, nodular appearance (when the condition is called elephantiasis verrucosa), or becoming covered by papillomata (then designated as papillomatosa), or less frequently assuming a smooth, shining condition (then known as elephantiasis glabra). From trauma, filth, etc., the surface may rarely become ulcerated; but this is not common. Howard Kelly regards syphilis as also a cause; but neither mercury nor iodides seem to be curative. Early removal might cure; but generally, when seen, the disease is too far advanced to be helped, the only treatment being a protective one, with healing applications if ulceration has occurred.

#### ACNE OF THE FACE IN WOMEN

For the troublesome acne of the face so often seen at the menstrual period the following may be advised: Empty the follicles at night; wash with very hot water; apply this ointment:

Washed sulphur .....	3.0
White resorcin .....	1.5
Vaseline .....	300.0

Sometimes it is better to use this more active preparation:

Sublimed sulphur .....	2.0
Salicylic acid .....	2.0
White resorcin .....	2.5
Green soap .....	2.5
Vaseline .....	20.0

In the morning this ointment is to be removed, with absorbent cotton, which is first dipped in a little olive oil and washed with a nonirritating soap. After the skin commences to desquamate, zinc oxide ointment is substituted for these.

#### UTERINE HEMORRHAGE AT PUBERTY

Menorrhagia is not common at the beginning of menstrual life, though uterine polypi sometimes cause excessive flowing from almost the outset. Very rarely the menorrhagia becomes a metrorrhagia; and this is most likely to occur in a patient who has hemophilia. The excessive hemorrhage

may also be a symptom of purpura, as well as of diabetes. Hence in all such cases the examination must be limited to a mere search for pelvic diseases or growths. A mild form of menorrhagia may be present in chlorosis, but it generally appears after the menses have been fairly well established. Tuberculosis also predisposes to hemorrhages at the menstrual period. Most cases yield promptly to remedies directed toward correction of the cause, excepting the hemophilic form, which is most intractable.

#### FOR HOT FLASHES

For the hot flashes of the menopause fluid extract of eucalyptus globulus is recommended; but it has to be continued for some time.

#### ABORTION CAUSED BY X-RAYS

By means of experiments on animals Fraenkel (*Interstate Medical Journal*) was able to further support the claim of Fellner and Neumann that x-rays cause distinct degenerative processes in the ovaries, and in pregnant animals a retarded growth of the ovum. Similar is the effect of an exposure of the thyroid gland to the x-rays. These results encouraged Fraenkel to use x-rays as a means of producing artificial abortion. Interruption of a pregnancy of three

months seemed indicated in the case of a young woman in whom a pulmonary tuberculosis, immediately after impregnation, rapidly began to grow worse. The author applied the x-ray to both ovaries, and to the thyroid gland. By protecting the rest of the abdomen with a lead plate he tried carefully to limit the effect of the rays to the ovaries. Twenty-five exposures were made, lasting from five to ten minutes, the thyroid being exposed every other day. After a short labor the ovum was expelled *in toto*.

Although the writer is convinced that the abortion was the result of the ovarian changes, he cannot deny that possibly a direct harmful influence is exerted by the rays upon the fetus. He also states that at times during the exposure the patient would complain of a cramping pain, probably caused by a uterine contraction, or would involuntarily void urine, indicating a contraction of the bladder. Of course fear, as a psychic effect of the procedure, may have played a role in the causation of these two phenomena.

The writer also mentions three cases in which marked disturbances of menstruation appeared in women in whom the thyroid gland was exposed to the x-rays on account of goiter. In two patients menstruation was delayed and extremely scanty, in a third amenorrhea resulted.

## DERMATOLOGIC THERAPEUTICS

#### ECZEMA OF THE VULVA

Eczema may occur on the labium majus or the mons veneris, extending later to the perineum, anus and buttocks, proving very annoying and persistent. During the acute stage the affected surfaces are very red and swollen and the condition may be easily mistaken for an acute infection (gonorrhea, etc.); but careful examination shows the presence of numerous transparent vesicles like pin-heads. Besides, there are present

signs of the rheumatic trouble, stomachic and colonic disturbances, etc. characteristic of acute eczema. By the third week the acute symptoms have all subsided and the signs of chronic eczema begin to make their appearance: the affected areas become covered with pus, crusts and dry scales, with fissures at the fourchet, in the genitocrural folds and later around the anus. At the menses the itching and burning are intense and suffering is often acute. Usually patches of eczema are now discoverable upon other

parts of the body; but sometimes the anogenital region above is implicated. The disease is essentially nervous in character; so that, in addition to the remedies prescribed for the local irritation drugs and diet peculiar to the rheumatic and the eczematous patient must be prescribed. Briefly: the diet must be bland and un-irritating and the bowels kept relaxed. In the worst cases the woman must be put upon an exclusive milk diet.

### ECZEMA OF EXTREMITIES

In cases of acute erythematous eczema of the extremities, when the itching and burning are very pronounced and annoying, the application of a dilute solution of adrenalin to the lesions will produce a rapid blanching of the parts and allay the intolerable distress. After the acute symptoms have subsided an ordinary Lassar paste, with or without ichthyol, wherein a small amount of adrenalin solution has been incorporated, will hasten the restoration to the normal.

### OINTMENT FOR SCABIES

There is, as a rule, no more efficient combination for the treatment of scabies than the following:

Sulphuris precipitati.....	drs.	2
Balsami peruviani .....	dr.	1
Potassii carbonatis.....	dr.	1
Saponis viridis.....	drs.	4
Adipis .....	drs.	12

The ointment is irritating, but if well rubbed in does the work quickly. Should a slight dermatitis follow, apply the following ointment:

Zinci oxidi .....	drs.	4
Bismuthi subnitratis.....	dr.	1
Talci .....	drs.	2
Petrolati .....	ozs.	2

### VARICOSE VEINS OF VULVA

While of minor importance in most instances varicose veins of the vulva sometimes cause great suffering. When quite

small they may be left alone, but when the vulvar plexus of veins has become ectasic in such a manner as to cause a marked, soft, pudendal swelling, operative measures should be favorably considered. These are radical but not serious. Their analogue, varicocele in the male, has long been considered a surgical affection; and yet enlarged veins of the vulva (while the suffering they cause has been distinctly recognized and the danger from rupture of the vessels in labor has long been known) have generally been regarded beyond surgical relief. If incision be made under strictest antiseptic precautions, the affected veins ligated with catgut and then excised and the wound perfectly dried and sealed with collodion, there is no reason why healing by primary union should not be obtained. It is sometimes best in coaptating the tissues to bury a line of sutures, quite deeply taken, in order to constrict vessels which have not been isolated and included in the ligatures, the larger thrombi, which sometimes are so extensive as to threaten gangrene of the parts, are often better treated in this manner.

### INTRAMUSCULAR INJECTIONS IN SYPHILIS

Next to intravenous injection of mercury the introduction of some form of this drug into the muscles constituted the speediest method of cure of syphilis. The chief objection is the local irritation, especially from insoluble mercury compounds, such as the salicylate which is injected in a 10-percent emulsion in petrolatum. It is a question whether mercury in this form is absorbed at best, and it is important to secure the best conditions for absorption. The injections of any mercurial should be made in the gluteal region directly into the muscle, great care being taken not to touch the sciatic nerve. Embolism is the most dangerous complication of the method, and is accompanied by sudden pain in the chest, weakness, and a suffocating cough. Great care should be taken to avoid this complication.



# GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



## CHLOROSIS A NERVOUS DISEASE

Some observations concerning the etiology  
and differential diagnosis of chlorosis,  
with its rational, dosimetric treatment

**Y**ES, my dear reader, you have read correctly, "a nervous disease." This notion, which when first heard, seems ridiculous was introduced by Prof. E. Gravitz of the University of Berlin. The theory is based on solid facts. But to demonstrate this it will be necessary first to establish the differences which exist between anemia, properly so called, and chlorosis. We quote from Dr. Robert-Tissot:

*Chlorosis.*—The concentration of the blood in chlorosis is always diminished. Its water content is augmented and its specific gravity is lowered, varying between 1030 and 1050.

The erythrocytes: Their number is not much diminished, being between 3,400,000 and 4,300,000. Their diameters vary between 11.5 and 5.2 microns in the middle, therefore averaging 7.6 microns, this being the normal measure.

The red blood-corpuscles (Hayem's "chlorotic hematies") are pale, and their concavities hardly visible. Nucleated red cells are rare or wanting altogether.

The quantity of hemoglobin is diminished in all hematites (blood corpuscles).

*The value [functional capacity?] of the hematies (red blood-corpuscles) is lowered, and this constitutes the essential fact, characteristic of chlorosis.*

Polychromatophilia is not very rare. It is not a lesion and only indicates the youth of the cell, and shows that the bone-marrow is in a state of reaction.

The total volume of the blood-corpuscles (which can be determined either by sedimentation or centrifugation) is in chlorosis no more than twenty percent, while in the normal state of the blood the total of the corpuscles is from forty to fifty percent. This shows that in chlorosis every corpuscle is poor in hemoglobin, although the volume of each blood-corpuscle by itself may be augmented, owing to its being infiltrated with plasma.

The serum of the blood in chlorosis amounts, as has just been said, to four-fifths of its total mass. Its concentration in severe cases is always a little lower than the normal but it differs on the whole little from that of healthy blood. The molecular concentration of chlorotic blood is in any case less diminished than it is in posthemorrhagic anemia.

This fact shows that the destruction of albumins in chlorosis is little or not at all increased. Chlorotic blood is therefore not affected with hydremia. The total quantity of the plasma is certainly augmented but the quality is normal. It penetrates very probably into the corpuscles and makes

them swell up. In centrifugation the corpuscles give up the plasma which they have absorbed. Chlorotic blood is, therefore, hematologically considered, affected with polyplasmia.

The leucocytes undergo no modification in chlorosis.

The number of blood-plates (hematoblasts) is always increased in chlorosis, and it is in this affection that the greatest number of these plates were observed. The coagulability of the blood in chlorosis is increased.

*Simple Anemia.*—The number of erythrocytes is lowered. The content of hemoglobin in each red cell varies but little. The molecular concentration of the serum is always lowered in simple anemia.

The blood-corpuscles present here some forms of degeneration (poikilocytosis). The blood is loaded with polychromataphilic cells, with nucleated red blood-cells with macrocytes and microcytes. The number of leukocytes is increased, and so is the coagulability of the blood.

The serum in anemia is in the main too watery, too diluted, yet the value of each corpuscle is almost normal.

Let us examine now the disease clinically:

In chlorosis, as in anemia, there is a general pallor, an enlarged area of cardiac dullness, a systolic murmur, venous murmur (*bruit de diable*), symptoms of cerebral anemia, scotoma, vertigo and faintings. On the contrary, in simple anemics we have none of the nervous troubles, no psychic anomalies, no anomalies of the appetite, no cardiac palpitations, no edema of the skin, such as gives the chlorotic the puffy aspect. Let us remember, too, that in the chlorotics the lesions of the blood are not always proportional to the clinical symptoms. The blood may be hardly affected while all the general symptoms are at full blast (*battent leur plein*). Finally, remember the very important fact that the bone-marrow in chlorosis presents no pathologic lesions. All these things compel us to admit that the blood in chlorosis is not primarily affected. Nor can autointoxications, genital hypoplasia, thyroid troubles be the efficient cause

of chlorosis, but they may be accessory causes.

Clinical observation may, on the other hand, indicate to us in what direction we are to look. All nervous symptoms show that the nervous system is here at fault. The analysis of the blood plasma and the turgescence of the papilla show that chlorotic patients have an excess of plasma in all their tissues. All these facts show that the exchange of fluids between the blood and the tissues is disturbed. This disturbance depends upon the blood-vessels and their ramification, the finest of them in particular. This function of exchange of fluids depends upon the vasomotors, that is, upon the nervous system. The ease with which chlorotic patients change their color (sudden pallor followed by redness not less sudden) shows that it is here we are to search for the cause and not in the blood-making organs, inasmuch as the bone-marrow is not affected even when the disease is fully developed. In a word, *chlorosis is characterized by a bad regulation of the fluid exchanges, due to bad functioning of the vasomotor nerves.*

The data given by Grawitz are based on indisputable hematologic facts and on clinical symptoms with which every physician is sufficiently acquainted, therefore these data cannot but be admitted without reserve.

What then do these indicate as to treatment? Should it be modified? The extreme administrators of iron in its thousand and one forms would, I think, do well to check their sideric fury. For dosimetric physicians the matter is different. With us practice has long since outrun theory. Strychnine, we know, and have said it over and over again, is the grand regulator of the nervous influx and the grand tonic of the multiple neurons which govern human life. It alone can act on the melancholy of the chlorotics, it alone, too, can act on the vasomotors in a state of disorder. In the grand period of growth when nutrition is of such paramount importance (and this means the exchange of the bodily fluids, or, better, the nutritive juices) strychnine is the



admirable weapon which will give the patient comfort and health.

To strychnine ought to be added the excellent tonic, the arsenate of iron, and quassin, which is stimulant to the gastrointestinal canal; and when palpitation of the heart is severe digitalin should be added. Quinine hydrobromide may well be joined to these, on account of its tonic and calmant action on the nervous system.—*La Dosi-metrie*, February, 1908.

### THIOSINAMIN

A very happy effect of this remedy is reported in *La Province Medicale*, 1908, page 103.

The case was that of a woman forty-seven years old who after being attacked with very severe blennorrhagic rheumatism was left with an absolutely complete ankylosis of the knee and a stiffness of the shoulder joint and limited motion in the elbow, wrists and fingers. The articular motions of the hips and ankles were also limited and painful. Before meeting with the failure of medical and surgical treatment the treatment with thiosinamin in the proportion of 1 in 25, and prepared cold, was instituted. From the 10th of September to the 3rd of October the patient received twenty-five hypodermic injections each of 5 Cc. in the abdominal skin, which makes 20 centigrams of the remedy in the solution. Immediately after the prick of the first injection the patient felt a taste of sulphur in the mouth, which was disagreeable and lasted for many hours and gradually disappeared. An amelioration of the joint trouble was felt on the eleventh day from the beginning of this treatment, and though the movements remained limited yet the patient declared the articulations were more supple and their mobilization occasioned no pain whatever. The amelioration increased on the following days. On the twentieth day, however, the patient noticed an important and new fact, namely a particular difficulty in walking, although the articulations had regained in part their suppleness and the pains were very slight. It seemed to the patient as

though the muscles were elongated and did not obey as in the past the incitation of the will. The muscles had lost their tonicity but were not paralyzed.

In this case the action of thiosinamin shows itself both as a real ameliorator of articular troubles and also as having an unfavorable action on the voluntary muscles and the heart-muscle. The patient in this case was tainted with chronic rheumatism and general arteriosclerosis and latent myocarditis.

We shall have to exercise care in cases like these, when we treat them with thiosinamin, not to go beyond the point of relaxing the periarticular fibrous tissues lest we impair the voluntary muscular system.

(The GLEANER ventures to suggest the propriety of using strychnine in cases like this together with the thiosinamin in the way an alkalometrist would be apt to do.)

### CONCERNING THIOSINAMIN

The much-promising name of fibrolysin has been given to a substitute for thiosinamin, which latter has the disadvantage of being very painful when administered hypodermically after the customary formula. It can, however, be given perfectly painlessly by employing the following formula: Thiosinamin, 1.0 (grs. 15); distilled water, 5.0 (grs. 75); glycerin, 5.0 (grs. 75). Of this solution 1 Gram (grs. 15) can be injected unhesitatingly into a feeble person, and the pain will not be greater than from a similar injection of morphine or may be not more than from the prick of the needle. It may be that the single injection from the formula will produce a weaker result than that from the customary formula, but the advantage is that the injections can be made as frequently as five or six times a week, without any drawbacks.

That the same results can be achieved from the weak solutions as from the stronger is evident from the following history: Patient, a woman 36 years of age; in her third pregnancy in the fourth month; cough for many years; hemoptysis two years ago; first parturition four years ago was spontaneous,

and the child died soon of convulsions; second pregnancy terminated with miscarriage in the fourth month; patient has complained for a long time of pains in the chest, cough and lack of appetite; since three years there has been pain in the abdomen, and obstipation; the patient has greatly emaciated recently.

Examination gave the following: Infiltration in both apices of the lungs; slight feverishness; high-grade stricture of the rectum; five centimeters (2 inches, about) beyond the entrance of the rectum seemed entirely occluded. On careful search a small opening was found near the posterior wall in which not more than the point of the finger could be inserted. The mucosa itself was perfectly smooth and soft. No nodules nor ulcers appeared. The stricture seemed to be caused by a cicatrix, the edge of which was sharp and smooth. With some trouble it was possible to introduce a medium-soft male catheter alongside of the finger as a guide. A quantity of stinking fluid feces was discharged and some solid crumbs, and much more of these came away by flushing beyond the stricture. This procedure was frequently repeated for fourteen days and gave momentary relief, but there was no hope of dilating permanently in this way, for the stricture became constantly stronger and tighter and the introduction of the instrument more difficult, the patient complaining more and more and running down rapidly. An operation was indicated and a surgeon in consultation urged dividing of the stricture.

Then Dr. P. decided to make a trial with thiosinamin and began with injecting the above-named solution into the gluteal muscles. The first injection was somewhat painful, but for a moment only, while all subsequent ones were perfectly painless and without any reactions, so that the further injections could quite readily be made in the same place.

The result far exceeded all expectations. After the fifth injection the catheter could be introduced easily and painlessly without the finger as a guide. After the eighth injection a small tube could be used instead of

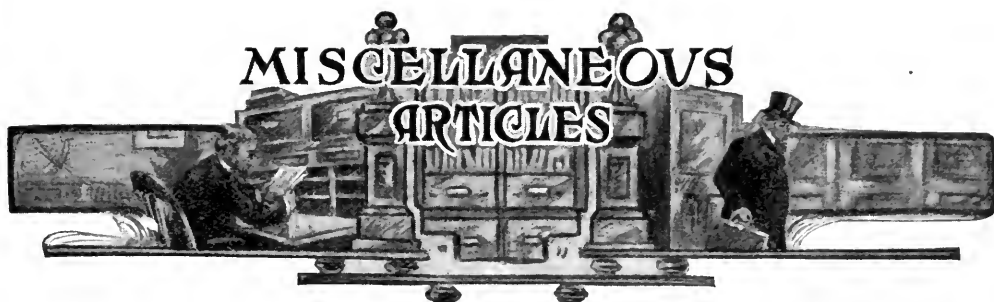
the catheter and the introduction of it with the finger as a guide very easily. For the first time then after a long time spontaneous fecal evacuations took place. It was found that two more strictures, less pronounced, and some ulcerations existed above the first stricture. The stricture, it must be mentioned, was perfectly smooth. The injections continued to be painless, and the patient could not express wonderment enough at the results, and laughed at her previous anxiety. Four weeks after the first injection of thiosinamin normal conditions of the rectum presented and the injections were discontinued. The patient evacuated her stools normally and without pain, and that permanently. On the course of the tuberculosis the injections had no influence whatever. The patient bore a living child and unfortunately died fourteen days later of acute miliary tuberculosis.

Dr. Pollak treated other patients with injections of the same solution for rheumatism and neuritis and always without pain or reactions. In all these the results were good, but he does not give their histories, thinking the one he detailed perfectly sufficient, and this one deserves well enough to be tested by others in similar cases.—Alois Pollak, in *Wiener Med. Wochenschr.*, 1908, No. 7.)

#### DECOLORATION OF LIVER SPOTS AND OTHER PIGMENTATIONS

The Italian physician, Dr. Adolfo Mas-soti, communicated to the *Societe Medicale des Hopitaux* at their meeting of February 14, 1908, a new method of treating chloasma and other cutaneous discolorations which he has practised with success, under the management of Prof. Balzer. The treatment consists in scarifications and the application of oxygenated water.

The results are very encouraging. The decoloration of the tissues is brought about very rapidly and almost without pain and without those vivid cutaneous reactions of other treatments which are so frightful to delicate ladies.—*Gazette des Hopitaux*, 1908, p. 233.



## OLIVE OIL IN "GALLSTONES"

A case in which there was a mixture of gallstones and some other things, and in which the olive-oil treatment "did the work"

AS to the efficacy of olive oil in gallstone trouble I want to tell you that I never see olive oil without recalling a case I had while practising in Woodville, Kentucky. The patient, aged about 50, of the cropper class, sent for me, and I found him in bed complaining of almost everything on the calendar, especially of pains characteristic of gallstones. As usual with this class of men (for whom I have no love), he wanted "something done right away, and he had the money to pay his doctor's bills (which I knew was a lie), and he had sent for me, out or five or six other doctors who had been trying to get his practice, because he knew I would do the right thing and do it in a hurry."

I said to myself, right here is where I get even for many stormy nights and cold drives that this class of people have made me take, so I expatiated for about ten minutes on the virtues of olive oil, although, if I hadn't happened to have a quart bottle, nearly full, which I carried in my buggy to grease the axles with, and it had been a box of mica axle grease instead, I should in all likelihood have praised the mica axle grease.

Luck, however, was with me, though, as usual, and that worthless, shiftless son-of-a-gun got the full benefit of that quart bottle nearly full of good olive oil. I didn't take any chances of his not taking it, staying long

enough to see him drink the whole thing, which he did not seem to mind in the least. I guess it was the first square meal his stomach had had since he had drawn his first advancement of groceries, when he made the contract to crop for Mr. Burnley. He drank all the oil, and I pulled out—I wanted to get away and laugh some, and I did.

I had to pass by this man's house the next evening, and went by full tilt; for all the fun had left me and I was in the usual state of mind that every country doctor knows so well when he is thinking of these long, lean, stringy, good-for-nothing deadbeats. But it did no good, for all the family were laying for me when I came back and I had to stop.

Well, the old fellow had left the house and sickbed and had taken to the backyard. He didn't have any time nor use for anything but some place where he could put that oil. I went back to his camping place and found him getting rid of oil and at the same time stirring with a stick around and around in another patch of more oil, gotten rid of before. And while thus busily engaged he began firing questions at me, wanting to know what I "reckoned" all this stuff was and where it could have come from.

So I began to stir some, too, and you can believe it or not, but I found enough in those pools of oil to start up a small-sized museum. As soon as I got a good look at one puddle

of oil I called for a chamber, and, as luck would have it, they owned one or had sent out and borrowed one (the latter, I guess). Anyway, they brought me a big one, the yellow kind that doesn't break easy, and I instructed Mr. Oil Tank to use it as a reservoir. When it was full I had his wife get a piece of cloth and strain the delicious contents, pouring boiling water through until everything but the collection for the museum had passed through. Then I repaired to the porch and examined my find, which, sure as you are born, were a conglomerate of tapeworms, roundworms, pinworms, gallstones, fish-bones, bones of rats, birds, squirrels, and many things I couldn't place. I could have found enough to rig out entire skeletons, even the shoulder-blades of the different animals. Well, I wrapped up the collection, told the fellow to "go to the devil," and went home.

This is all true, every word of it, and if it does not show the efficacy of olive oil in gallstones, it will at least appeal to the country doctor as a good remedy for the migrating cropper.

You do not necessarily have to print this, but if you do, I will wager that there is many a country doctor who can appreciate it.

THOMAS E. MOSS.

Vigan, Ilocos Sur, P. I.

#### PROCRUSTEAN DOSAGE

I was much interested in reading some of your observations on "drug action." It reminded me of what occurred to my first wife many years ago. At that time I was not well versed in the diseases of the eye. Mrs. S. was taken with rheumatic iritis. I sent her to a well-known eye-specialist, who not only diagnosed her trouble but sent the wherewithal to treat her, he having, at his office, put a 1-percent solution of atropine in her eyes, and directing that this should be frequently used. On coming into the house she rushed to the water-faucet, huskily stating that she had drank a pail of water and wanted another. The pupils of her eyes were greatly dilated and face flushed.

I informed her that this was the effect of the drops. With a wife's prerogative she stated that it was time to repeat the application, and since the doctor so ordered, she wanted it done immediately. I had to do some tall talking to prevent it, especially since what she told me was corroborated by her accompanying friend. (And parenthetically let me say, specialists are not good consultation doctors.) The iodide of potassium given so offended her stomach that it could not be continued. Knowing that the atropine was used to dilate the pupil and the iodide to cause interstitial absorption, I perforce used a more dilute solution of the atropine and substituted 1-3-grain iodide of mercury pellets three times daily. The results were the best.

There are three things especially a young physician should study when he settles down for practice: First, locality, reflex-action, idiosyncrasy; second, to give the smallest possible quantity to effect a given end; and, third, to remember that the nervous system can simulate almost every disease.

E. B. SILVERS.

Rahway, N. J.

#### LIKES THE POST-GRADUATE COURSE AND WISHES US SUCCESS

Doctor, I think the postgraduate course is fine, and yet it is only like the other productions of yourself and coworkers, and I, as one of the members of THE CLINIC "family," should be greatly surprised if it had been other than excellent.

I felt, Doctor, when it was first started that it would be impossible for me to take the course, but your letter urging me *to take time* caused me to try. It is a great source of pleasure to get replies to my examination papers bearing the 100-percent mark. Now, Doctor, most of my work in the course is done late at night, for I am in charge of a large work as physician and surgeon and look after the welfare from the medical side of at least nine hundred persons; beside this I also attend to quite a large outside practice. So you see I have but little time for anything but work.

I manage to read CLINICAL MEDICINE, if I do have to let other journals pass by. It helps lots of times because the ideas of some of the "family" appear there.

In regard to some of the knocks that other journals are trying to give the alkaloidal products, they cut no ice with the bedside doctor, the man who uses them and gets results. We care not what others say in condemnation but go right ahead, for while we are not all from Missouri they must show us just the same.

I am convinced, Doctor, that the "family" feel kindly toward you and your coworkers because of the great help you are to them in more ways than one, chief of which being that you give us good, pure, reliable, active principles. You certainly are doing a good work in making our profession an exact science as well as an art. Wishing you all success in your work,

D. O. THOMAS.

Johnetta Boro, Pa.

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#### EMETINE.—THE POST-GRADUATE COURSE

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It is with some timidity that I approach the readers of this journal for a short chat in the interest of our profession. But knowing that it is the many drops of water that make mighty streams, I offer my mite.

To begin with, I will say that I am a new convert to the philosophy of alkaloidal treatment, and my experience thus far has been one of pleasure and profit. Nowhere yet have I met with disappointment in the prompt action of the active principles, and this has given me confidence in their virtues from a medical standpoint. My first experience was in a prescription that I once gave to a lady for a cough. It was composed of white pine compound with emetine granules. I was using a shotgun plan, thinking that if one kind did no good the other might. Result: in a few days the lady sent her little boy to my office stating that she wanted some more of those granules, that so long as she took the *granules* her cough was better. This was a revelation to me, namely, that the virtue of my shotgun

prescription was in the emetine granules and not in the white-pine combination—

I might mention other experiences that I have had with the granules, and I have had good results in all my cases. This gives me implicit faith in their medicinal virtues. Theory is becoming fact with me in my practice in regard to them. I have always been slow to endorse a new theory and have followed the same course as to the granules, but the evidence has been all in their favor.

Now as to the Postgraduate Course. I have been asked for an opinion with regard to the good it may do for the profession. My answer is: It is a grand move in the right direction; it will be the means of bettering our own social conditions; it will be the means of making us active and creative members of our noble profession, instead of mere passive floaters. We, as members of the "family," should feel grateful toward the faculty of this course for the pains they are taking in our behalf in this direction. It has been intimated to me that the faculty was grinding an ax of its own in this matter, to which my answer has been, "Let them grind—we are getting sharper during the process." Again, this course will make us better acquainted with the chemistry of drugs and their application to the needs of the diseased human body. When we can practise medicine from this standpoint we shall not follow the cut-and-dried plan so much.

I believe a postgraduate course down the entire line of the different branches of medicine would be a grand move in the right direction. What say other members of the "family" in regard to this matter? We know that the organic kingdom in the vegetable world contains many elements of matter that are found in our human bodies. Now when we know how to make the application of these elements of the vegetable work to the wants of the same elements in our bodies, then it is that we look for good results in our noble profession. After the science of therapeutics comes the art of its application in order to get the best results in our work. When this is done, we may need a new formula for each one of our cases.

I mean by this that each case should be a law unto itself for us to consider in our work at the bedside. Until we are able to do these things there must be some guess-work in our processes and our patient is the victim. The postgraduate course is for the purpose of helping us to avoid guess-work in the measures we employ for the relief of our patients.

W. A. FERGUSON.

Brighton, Ind.

### FACTS CONCERNING ATOMS AND MOLECULES

To the many perplexing problems which present themselves to the busy practitioner of today there is added a very interesting and important one relating to atoms and molecules. The development of synthetic chemistry in the last fifty years has brought these terms very commonly into use in every sphere of intellectual activity. So general in fact has their use become that the student whose range of work, whose specialty we might add, lies outside the domain of chemistry proper, rarely questions their real significance. Like things become so common that the critical eye of the keenest observer ceases to behold them, these terms form a part of the vocabulary to be used axiomatically. They are employed to convey ideas of definiteness and concreteness, but rarely, on analysis, do they do more than transmit ideas of a very vague nature, indeed. Inasmuch as chemistry has so enriched the armamentarium of the physician and has added to his *materia medica* so many invaluable compounds built up in the chemist's laboratory of atoms and molecules; inasmuch as nature's own workshop has been compelled to divulge so many of her priceless secrets for the use of medical science; a word, to those whose life's business has compelled them to relegate to dark and unused recesses of the mind all thoughts of the specific significance of atoms and molecules acquired at the university, may have, it is to be hoped, a refreshing and useful effect.

Not burdening the reader or ourselves with the conceptions entertained by the

ancients, the Greeks and Romans, and the medieval alchemists, concerning matter, we will enter directly upon the subject of these few paragraphs. Matter, first of all, the chemist tells us, is constituted of elements.

In order to make clear what is meant by elements let us select as a material example water, and subject it, by means of an electrical current, to a process known as electrolysis. By this procedure water is decomposed, forming two gases, hydrogen and oxygen, possessing many distinctly different characteristics. Every effort on the part of scientific investigators to redivide these gases into other substances have been baffled. The phenomena and the laws governing the phenomena of those substances have been studied and deduced, and all facts gleaned up to the present status of science relating to them compel us to view them as matter in an elemental form, and hence, these constituents of water—hydrogen and oxygen—are termed elements.

By means of various chemical processes, involving the aid of heat, light and electricity, as many as seventy-eight elements have been isolated. It required many years of painstaking labor to evolve a theory which would account for the phenomena of these elements when brought into contact with each other, in other words, to explain chemical activity. Many interesting and laudable hypotheses were advanced which, one after the other, were felled by newly discovered facts. It was not until the present atomic theory was deduced that the science of chemistry was placed on a firm foundation.

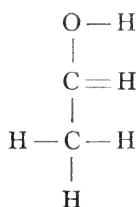
According to this theory each element is made up of particles termed atoms, of definite weight, infinitely minute, no one in contact with another and chemically indivisible. These particles possess an attraction for one another and group themselves into twos, threes, or fours, according to their nature, thus forming what are termed molecules. Molecules then are made up of atoms. In case of elements they are the same kind, and in case of compounds they are of different kinds. It is difficult to state with any great degree of certainty who first conceived the idea of matter composed of atoms.

The merit, however, of this conception, the atomic theory, is generally accredited to John Dalton, born in England in 1776. Among those prominent in developing and establishing this theory may be mentioned Berzelius, Davy, Guy Lussac, Berthollet, Mendelejeff, Lothar Meyer, and many others of note.

Dividing matter into compounds, and compounds into molecules, and the molecules in turn into atoms, determining and ascribing definite weights to these smallest particles, using hydrogen, which is the lightest of all elements, as a basis or unit, is a work which is accomplished by means of the atomic theory. The relative mass and volume of these atoms have been accurately determined by the chemist and remain as unquestionable facts of science. What the real mass and weight of the atoms are, is yet but a matter of speculation. Philosophers, whose field is that of the speculative and theoretic, have produced some very interesting work along these lines. By a series of very simple and lucid arguments Marc Antoine Gaudin, in a work entitled "*L'Architecture du Monde des Atomes*," demonstrates the presence of 8,000,000,000,000,000,000,000 atoms in a cube of metal but 0.002 mm. in thickness. It is perhaps more difficult to imagine particles so minute than it is to have a conception of the distance separating the earth from the most distant of stars. The chemist and those who have to do with the composition of matter bother themselves but little with such speculation. For the practical work of such it suffices to give any volume to the atoms with which they are dealing. The atoms may be regarded as being as large as tennis balls, or any size in fact which will enable the mind to group them in their right relation in the molecule of which they are to form a part.

Each atom has its symbol. H represents hydrogen; O, oxygen; Fe, iron; Cl, chlorine; Au, gold; C, carbon, etc. By means of these symbols formulæ are constructed to represent the molecule, thus  $C_2H_5OH$  represents a molecule of grain-alcohol;  $HCl$ , hydrochloric acid, etc. There are several kinds of formula made use of to represent

the molecule. Thus we have the empirical.  $C_2H_6$  is an example, giving, as is seen, but the number of atoms in the molecule without illustrating their position or relation. There is the rational, or constitutional, of which  $C_2H_5OH$  may be selected as a type. This kind of formula gives the relation of the atoms, but does not illustrate the positions. The graphic formula, however, gives the number of the atoms, their position and relation and is designed to represent clearly the composition of the molecule. The graphic formula of acetic acid for instance is represented thus:

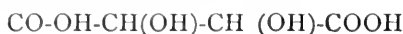


It is therefore readily observed that the empirical and rational formulæ, which are those which the physician most frequently encounters, are but suggestive of the real composition of the molecule. Proceeding a step further into the intricacies of chemical formulæ we encounter a phase of atomic arrangement which is termed isomerism.

Chemical analysis has brought to light the fact that a great number of compounds differing in their physical and chemical properties possess the same percentage composition. Such substances are said to be isomeric. Sometimes the isomeric bodies contain the same number of similar atoms in molecules of the same size and differ only in the arrangement of these atoms; at times they contain similar atoms united in the same proportion but not in the same number in molecules of unequal magnitude. These constitute two kinds of isomerisms. The first is termed metamerism; the second polymerism. Acetic acid,  $C_2H_3O.OH$ , and methyl formate,  $CH_3O.OCH$ , are examples of two metameric bodies. Examples of polymeric bodies are acetic acid and glucose.  $C_2H_4O_2$ —acetic acid;  $C_6H_{12}O_6$ —glucose.

During recent years yet another form of isomerism has been noted. Atoms consti-

tuting molecules may not only be the same kind and number but they may even be similarly grouped. Tartaric acid for instance which has the formula



exists in four distinct modifications: dextro-tartaric acid, levo-tartaric acid, mesotartaric acid and racemic acid.

It is not within the scope of this article to elucidate the theories which account for these curiously intricate facts. It suffices to call the physician's attention to their existence. He will be enabled to give some account at least for the differences exhibited in the physiological action of certain vegetable derivatives whose chemical formulæ to all appearances proclaim them to be identical. This brief sketch on atoms and molecules, it is hoped, will be an aid to a clearer understanding of the terms and evidence the fact that chemical formulæ can signify but little save to those who seek to master chemical science. There will always, however, remain to the physician a decisive means by which he may know that with which he deals, i. e., the results of personal observation.

J. W. FORBING, B. S., Ph. C.  
Chicago, Ill.

#### CONSTIPATION OF INFANTS AND INFANTILE COLIC

There appears to be a growing tendency to constipation of infants from various causes, faulty diet being chief, in my opinion.

The nursing babe often suffers from the effects of the mother's mode of living—unsuitable, unassimilated, irregular diet, etc.—that she herself has not given a thought as having any connection with her offspring's indisposition, and which, with good medical advice, patience and perseverance, may be corrected; provided she has the good sense to follow the advice given, without resorting to drugging and dosing through the suggestions of aunts, cousins and neighbors.

Whatever the cause, the conditions must be changed if we expect results. However, so few mothers are willing to subject them-

selves to a plain, laxative, wholesome diet, with but a small allowance of rich pastry, spices, strong tea, salt meats, rich gravies, etc., that it is discouraging for a physician to attempt to mend matters in this way when there is such a long list of pleasant purgatives to choose from and which the patient, as a rule, will accept with more confidence than the right way of correcting their own habits.

Yet, the correct and honest thing to do is to remove the cause, if possible. Infants fed on cows' milk are more subject to constipation than breast-fed ones, but when cow's milk is used, if fresh milkers can be obtained the results are more satisfactory and constipation less liable. But, if it does occur it often can be remedied by giving a little less of the milk, properly diluted, according to the age of the babe, and adding cream, olive oil or any of the fats that seem to answer the purpose best, according to each individual case and the advice of the physician in charge.

When neither the breast-milk nor milk of the kine can be satisfactorily utilized for feeding, we have yet the varied class of infant foods to choose from. Horlick's malted milk never constipates and sometimes acts as a slight laxative, while Eskay's is the opposite and a most excellent food when there is a tendency to be lax. Then we have Henri Nestle's food, which contains more starch, perhaps, than any of the foods extant; and though starch has so often and so strongly been condemned, it many times fills the bill for an all-around infant food when the whole category of other foods have failed to nourish or be assimilated. Mellin's Food and Allenbury's are great favorites with many, and dozens of others, including Borden's condensed milk, which should all be given a fair test in order that the very best possible food may be provided for these little fractions of humanity whose whole life may be more or less influenced by the proper or improper use of the food-producing material the Great Creator has placed at our disposal to build up strong men and women, rather than those weaklings that are set adrift in the world



by improper, irregular diet in childhood causing indigestion, flatulence, bowel and stomach trouble, colic, and that long train of ailments incident thereto, too numerous to mention.

Too frequent or overfeeding is the cause of more irregularities than a scant diet, though a babe that is hungry is uncomfortable and fretful; hence the quantity and quality should be determined carefully by the capacity of the babe's stomach, as babes of the same age will not always thrive on just the same allowance. One may cry with hunger on what would be a full sufficiency for another, another may require a food richer in fats, and so on, all of which should be closely watched if we wish to avoid colic.

Very few babes cry with colic that are judiciously fed in suitable quantities, unless through neglect they are allowed to go with cold feet—another source of infantile colic, that usually may be overcome by diluting the food with two-thirds water as hot as the babe will take, giving plenty of warmth externally with soft warm flannels, hot water bottles, or any convenient vehicle of heat, until there is warmth without and within.

An incubator is a grand thing for the newborn or very young babe, especially if for any reason it is not thought advisable to give it a place in the bed beside the mother. It is my impression that the day is coming when incubators for infants will be manufactured by wholesale in a new and improved style and placed on the market as a portion of the necessary outfit awaiting the stork's arrival.

In conclusion I have to say to the young and timid physician just starting out, it will be well not to be too modest about seeing that his orders are obeyed, as even when he has done his best, there is a possibility of being unjustly censured (as I have seen) in case the babe does not thrive well. When the mother or nurse, as the case may be, through negligence or stupidity pays little or no attention to the quantity, quality, cleanliness or time of feeding prescribed, it lends dignity to the physician to insist on being obeyed so far as is reasonable. Cleanliness cannot be too strongly urged,

scores of babes, as we all know, with their mothers, have come to their death for lack of it.

C. M. H. WRIGHT.

Blaine, Ills.

[We agree with Dr. Wright, that every case of infantile constipation should be corrected by hygienic and dietetic methods, if possible. This is particularly important in cases showing a tendency to chronicity. It is true, however, that many emergencies exist, and always will exist, in which laxative medication for the babies will be demanded. In such cases it's simply a case of choosing "the best."—ED.]

#### STRYCHNINE POISONING IN THE DOG

I have seen much adverse criticism of late on the composition and therapy of the H-M-C, which leads me to report this case in which it was used successfully in strychnine poisoning.

My pet English bulldog obtained some meat saturated with sulphate of strychnine, which was bated for the pestiferous rodents occupying my cellar. The furnace room being separate from the vegetable room, and containing only the furnace and coal, we did not think the pestiferous rats would convey the poisoned meat into this furnace room, and the dog was not forbidden to follow any one who was looking after the furnace. But it seems that our confidence in safety was unfounded. The dog came from the cellar with our hired help, and in less than fifteen minutes fell over with a tonic convulsion; instantly I recognized the cause and "drenched" him with milk and lard, but with little or no effect. I also gave by mouth 30 grains potassium bromide and 15 grains chloral hydrate; but the tonic convulsions continued unmitigated, repeated about every three minutes, until I gave him up as a dead dog. "He was as stiff as a poker" and opisthotonic, eyes open widely, and insensible to touch or light. At this junction I gave him hypodermically one tablet H-M-C and in fifteen minutes he became more quiet, and in thirty minutes he was relaxed and

seemed to be asleep. In five hours he had another spasm of a much milder type; the H-M-C was repeated (in full doses) hypodermically, which allayed all the symptoms of spasm, never to return, and today he is as well and frisky as ever.

Of course one case does not establish a fact, but we have that much faith in the H-M-C: were any of the genus homo, under my care for strychnine poison, I should use it, as I did in the case of my dog, and should expect a happy result.

Now, Doctor, I send you this simple statement of a case which happened ten days ago, that others may try and prove its efficacy and thus possibly save the life of an unfortunate.

I have not attempted, and will not, to differentiate between hyoscine and scopolamine, but I do know that the combined effect of hyoscine, morphine and cactin is one of the greatest discoveries, equal to that of chloroform, and in many respects, superior, as a cerebrospinal sedative.

C. E. BEARDSLEY.

Ottawa, Ohio.

#### REMEDIES FOR MALARIA

A short time ago a copy of a medical journal fell into my hands and in it I noticed an article on the treatment of malaria without quinine. The writer referred favorably to some half a dozen remedies which he or others had used for that purpose, but he failed to mention two with which I have had considerable experience.

Beginning practice, some forty years ago, in a locality where malaria abounded, I often met cases in which quinine proved unfavorable. The first substitute I tried with success was hyposulphite of sodium. This remedy could be given easily in solution and almost all patients took it without trouble. Often I used it alone, with complete success, in breaking up the attack. In some instances it did not succeed.

Changing to another locality, where the malarial poison was more abundant and tending often to the pernicious type, I was not so successful, largely, it appeared, be-

cause so much larger doses were required, so that I got too much of a purgative effect and was obliged to leave it off.

I cast about for another remedy, and from some source, not now recalled, I was led to try ammonium picrate. This has never disappointed me. It is especially satisfactory in old chronic and "third-day," cases, but answers in all kinds. Never using more than 1-3 grain three or four times daily, it invariably checked the most obstinate attacks, and so thoroughly were the patients relieved that relapses were very rare. Even in children too young to take capsules it did good work, although its intense bitterness made it a disagreeable dose in solution, which was necessary for little folk.

In giving this ammonium picrate in capsules I always first rubbed it up with bismuth subnitrate, sodium bicarbonate, or some other remedy which happened to be indicated for the purpose of preventing irritating action on the stomach. I never met a case that showed idiosyncrasy against its use as I often have for quinine.

J. B. DRAPER.

Oswego, Kans.

[Sodium hyposulphite is a favorite with the eclectics—also with photographers, as a "fixing" solution. The eclectics recommend it where there is a broad, pale, flabby tongue, with whitish coat. It is an intestinal antiseptic, as well as a laxative, and that is probably the explanation of its success in malaria. As we have often pointed out, intestinal toxemia is a factor which is too often overlooked in the treatment of this disease. Clean the bowel out well, stimulate gently the action of the liver and keep the primæ viæ as nearly aseptic as possible, and these cases will improve—yes, often recover entirely—with minimum dosage of quinine. In our opinion the massive dosage of this alkaloid is rarely needed, the small, frequently repeated doses of the arsenate or the hydroferrocyanide usually doing the work, providing "clean up and keep clean" is made the first and fundamental thing.]

Ammonium picrate has some reputation as an antiperiodic. Just how it acts seems

to be unknown, though we suspect that its antiseptic quality is really the explanation of its therapeutic activity. It should be remembered that picric acid is formed by the reaction between nitric acid and phenol.—Ed.]

## WHY DO I LIVE SO LONG?

### II.

Soon after coming to Andover I was prostrated with the severest attack of sickness of my entire life. It manifested itself externally as scarlet-fever, but the attending physician, Dr. Howard, pronounced it a case of intestinal inflammation. He was a true eclectic, for he was a graduate and practitioner of the regular school and used also eclectic and homeopathic remedies. I was in delirium the greater part of twelve weeks, and all I recollect of the acute febrile stage is the excruciating pains I felt on the left side of the chest between the precordium and the scapula, which I then imagined to be no wider than the thickness of the hand, and I wondered how a morsel of food or a mouthful of water could pass through there. This pain has never ceased to attack me sporadically up to this present day. The attack does not last more than a minute, sometimes even less, and is instantly relieved by Hoffman's anodyne, sixty drops, or by eructations of gas from the stomach spontaneously or induced. When not thus relieved the system is left exhausted for some hours. The seat of the trouble seems to be about the cardia, and I hope a careful necropsy in due time will give the profession some light on this obscure and rare affection.

After my graduation from the College of Physicians and Surgeons of the University of the State of New York, on October 31, 1859, I practised medicine for a few years in Salonichi and Bitoglia-Monastir, European Turkey, and then went to Vienna, to attend the clinics there. In the war of that country with Italy in 1866 I applied for a medical commission in the Imperial Navy and was received, after passing a literary academic examination in the University Academy of Vienna.

Being accepted, I was commissioned surgeon on board the Feuerspeier Battery, off Venice, Italy, and then on the corvet Seehund when it was present in the battle off Lyssa in the Adriatic Sea, July 20, 1866, under Vice-Admiral William Tegethoff against the Italian fleet under Admiral Persano, who had double our number of vessels and men. All the same we beat them, destroyed two of his best vessels, one of them the *Ré de Italia*, built in New York by General Webb, the other the frigate *Palestro*, and drove him away from the Austrian Coast in an hour and twenty minutes. We had very few casualties. This was the first battle that was ever fought by iron-clad propellers. The devotion of our men and officers to our great Admiral won the day. It inspired me to write a description of the battle in English verse and I dedicated and presented it to the great Admiral and man, who thanked me for it in an autograph letter, and said it reminded him of Byron's description of a sea storm in his *Don Juan*. I received a present of three hundred dollars from Emperor Franz Joseph for the poem.

After the war was over I was entrusted with the supervision of a naval smallpox hospital at Pola Dalmatia. The people of that part of Austria were generally of the ignorant antivaccination fanatics seventy-nine and more years ago. I had on an average sixty patients all the time, with some very severe confluent cases. The mortality did not amount to one percent. The treatment was *pro re nata*, but the external application to the exposed parts of the body was plain cold water, which answered very well. I did not revaccinate myself, relying on the efficacy of my vaccination in childhood. After two months I was ordered on the cruising side-wheel steamer *Dalmatia* then plying on the Austrian Adriatic coast. I was on that duty for some months and then applied for dismissal in order to return to the United States, and was honorably discharged.

In Vienna I fell in with some American friends who gave me letters of introduction to their friends at Leavenworth, Kans.,

where I opened practice and continued there for some years. Here I had a severe attack of gastritis which confined me to my bed for a few weeks and left me with a very poorly digesting stomach, which was specially intolerant to simple water. I had to drink cold tea, which became disagreeable, and then I took to drinking simple carbonated water, which relieved me completely after about a year's time.

An old uncle who came over with me on my first trip to this country and then located in Cincinnati learned of my second arrival and began to urge my coming to that city and offered to afford me every facility to open a good practice. I accepted the offer and practised there for nine years, and in the last year I met with the saddest event of my life, the death of my then only son, from my second marriage, five years old, by the accidental administration by a druggist of three grains of morphine instead of quinine. He was an unusually bright and beautiful boy from his very birth. It came nearly breaking my heart and ending my life. I could not practise medicine any more and I gave it up to accept a professorship in Heidelberg College, Tiffin, Ohio. A religious disagreement with the faculty of the college, which was theological at the same time, made me sever my connections from it, and I went to Yankton of what then was Dakota Territory, and thence to Vermillion to organize what is now South Dakota University, whose first president I was till sectarian and political chicanery ousted me, as it did a half dozen other men from the same office. A professorship was then offered me in Bethany College, West Virginia, which I accepted and continued for a few years in that capacity. During my first year here my hereditary polyuria (or better said, polakisuria) asserted itself during a very cold winter and our living in a cold house.

I then relinquished the place to begin practice in the neighboring town of West Liberty, this being in the early nineties of last century. It was here that I became acquainted with the alkaloidal method of Burggraeve, known in France and else-

where as the dosimetric practice of medicine, and which at my suggestion is also known in this country as "alkalometry." This has been successfully advocated and illustrated in this journal as well as in its predecessor, *THE ALKALOIDAL CLINIC* of pleasant memory. I soon became a regular contributor to *THE CLINIC*, and when I became disabled for further country practice in 1898 by a severe acute attack of diabetes mellitus, described in *THE ALKALOIDAL CLINIC* of 1899, pp. 427 and 877, I came to Chicago on the invitation of Dr. W. C. Abbott to recuperate my health. He kindly invited me then to become a member of the editorial staff, on which I am still active at this moment as the "Gleaner in Foreign Fields" and in other departments.

In 1903, on the 7th of March, I met with a severe accident to my right knee by an unaccountably wilful neglect of a street-railroad conductor on Madison street, west of Halsted. I had to go west on Madison street, a grip-car and two trailers came and stopped near the crossing of Halsted and Madison streets. An old woman came down from the rear steps of the last car. I had a satchel and an umbrella in my right hand. I took hold of the stanchion of the rear platform with my left hand and put at the same time my left foot on the lower step of the platform, and before I had time to put my right foot on the same step the conductor who stood on the platform, close to the rear dashboard, rang the bell and the car started briskly forward. I saw the danger I was in when the start threw me partly round with my back to the car. To take down my left foot from the step and let go my hold on the stanchion would have been to run the risk of fracture of the left leg by the crash of the platform steps against it and also of my being thrown forward onto the ground and meet with various possible injuries external and internal. My safety lay in not letting go of the stanchion but to let myself be partly dragged along and partly jump after the car with my right foot. I hoped the conductor would stop a second or two and let me either off or on the car,

but instead he caught me by my overcoat collar and dragged me along. And so I was dragged on and jumped on for some forty or fifty feet, I making heavy thumps with my right fool on the ground three or four times.

At last the car slackened its speed somewhat, my collar was released and I was jerked off of the car onto the street, the conductor not stopping a moment to help me. While falling into the mud (it was a rainy day) I was caught up under my arms by two young men, who voiced forth like saving angels, "Old man, you shan't fall into the mud!" They carried me onto the sidewalk and then to the vestibule of the hotel on the northwest corner of Halsted and Madison streets. I was laid down on the floor, and I told them to go for a physician to the Illinois Medical College on the next corner north. The supine position with head unsupported was very uncomfortable and I told the crowd of people to set me up carefully on the lower step of the staircase leading up from the vestibule. They did so and I then fainted.

When I revived I was in profuse perspiration and was glad to see my friend Dr. Frutchy by my side. Only a half hour before this I had been at a surgical clinic with him in the Illinois Medical College. We carefully examined the limb and found neither fracture nor dislocation, but motion of the knee was very painful and standing on it was impossible. I was carried in a police ambulance to the Northwestern Depot, thence onto the train to Ravenswood and to my residence on Eastwood avenue, was handled very carefully onto a lounge and the injured limb carefully supported right and left so as to secure immobility for the present the best way possible. I ordered cold water compresses around the knee-joint, and it being already late in the evening I did not send for any medical help.

I came to the conclusion that I met with a very severe outward twist and sprain of the right knee, the injuries being mainly in the popliteal space, the bundle there of artery, vein and nerve, and the popliteal muscle beneath them, the pain, both spontaneous

and on touch, being chiefly there. Rest was the chief indication and this the entire limb had for over four weeks, I not coming down from the lounge during that time. When I finally left the couch I took at once to the use of crutches so as to obviate as much as possible painful pressure of the articular surfaces, and I am using them to this day. To prevent any consequent stiffness of muscles and any atrophy I had the muscles around the knee and on the leg gently massaged daily for about two weeks. A few days after the injury the entire limb below the knee became intensely ecchymotic and went through all the colors of the rainbow in the period of about two months. From this I concluded that the popliteal vein was ruptured.

To prevent any synovitis or bursitis I had the knee and some inches above and below wrapped round with cold, wet towels covered with dry ones, changing them as often as they became hot, day and night, for four weeks. Under this treatment I came out without an effusion into the joint, but with a permanent pain in the popliteal space, sometimes more and sometimes less localized and radiating up and downward, and always aggravated by the change of the weather for the worse. There must have been an injury to the nerve. I cannot either extend or flex the injured limb as much in walking as I can my healthy left limb and I am compelled to make half paces only in walking. There is also a limitation to the flexion of leg on thigh to about half. In going up stairs I progress with the left limb and pull the right one up after it, and going down I descend cautiously on the right limb and bring down the left after it, thus preventing any normal full flexion of the injured knee by normal alternations of the limbs in ascending and descending of stairs. Bearing the weight of the body even on both knees is impossible without pain in the right. Walking has to be slow and exercise is out of the question, and constipation is the consequence with all its consequent evils, though digestion and appetite are good.

What the pathological condition of the tissues in and around the knee is would be

very interesting to know. An x-ray examination revealed nothing. I solemnly request here my friend Prof. B. Brindley Eads to make a careful dissection of my right popliteal space when I am dead and he survives me, or in the adverse case that some other competent surgeon should do it. Sprains are meagerly treated of in textbooks, and in reviewing many books on surgery I have met with but one tolerable literary treatment of this subject, namely in the third volume of Bryant and Buck's "American Practice of Surgery," 1907. My injury should be photographed and colored and compared with my normal left popliteal tissues.

And now, considering what I went through during my life, the diseases I passed through and the effects they left behind them, considering, too, the severe mental distresses that I passed throughout my life—religious, social, pecuniary and of family life, some of which will never be disclosed and will not terminate except in my death—all of which sufficient to shorten an ordinary life (and I am an unusually sensitive being), considering all these, why then do I live so long? I have never done anything special to preserve me so long in life, nor do I write these lines now in decrepitude of either mind or of any bodily functions and natural appetites.

What was, what is, there in my favor? First of all, inherited longevity. Secondly, a moderate indulgence in all the appetites of life. Thirdly, the regular and pleasing literary life I am enabled now to lead these last ten years by the appreciative kindness of my friend, Dr. W. C. Abbott, in whose great work, "doctors for doctors and a square deal for every one" I am proud to have my part and to whom, as strength permits, I give unstinted service and loyalty of my heart of hearts, only regretting that my years (unless it comes quickly) will not permit me to see, with and for the profession I love, the full fruition, for them, of the principles for which he stands. Fourthly, absolute exemption from any gonorrheal and syphilitic taint.

Lastly, I look for the coming of the great, strong brother Death without enthusiasm, but also without dread. "Into

Thine Hand I would commit my spirit, Thou hast redeemed me, Jehovah, God of Truth." (Ps. 31:6.)

EPHRAIM MENACHEM EPSTEIN, M.D., A.M.  
Ravenswood, Chicago, March 1, 1908.

### AGRIMONY

This remedy has been mentioned in connection with my name in your excellent journal lately, but from the remarks of some of the correspondents, it seems that very few physicians use it at all.

In your reply to O. G. on page 569 of the April number of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* you indicate that it is seldom called for, and that any specimen found in the ordinary drugstore will be inert. You are right. The only way to get a reliable article of agrimony is to send to Lloyd Brothers or Wm. S. Merrell Chemical Company, both of Cincinnati, Ohio, for it, unless you are near an eclectic drugstore.

The normal tincture (Merrell) or the specific tincture (Lloyd) may be given in 5- to 15-drop doses, every six to eight hours. Or if you want an easy action on the stomach, put two fluid drams of either of the above preparations in four ounces of water and give a teaspoonful every two hours when awake.

The action of agrimony is not that of a simple astringent. I have used it in two disease-conditions: First, in bronchial asthma, where the secretion was tough, sticky and excessive, and causing spasmodic efforts of the lungs to expel it, with much coughing. It has given me great relief in a short time. Second, in pain due to chronic renal inflammation. It is far better than narcotics, as it relieves the pain just as soon as they do, and tends to heal the kidneys. In renal and cystic congestion, with a great deal of pain and much mucus in the urine, agrimony will give speedy and continued relief.

In conclusion I must protest against the statement that my home is in Washington, D. C., as your correspondent assumed. It is in the wonderful State of Washington, lo-

cated at the northwest angle of the United States south of Canada, in which are the famous young cities of Seattle, Tacoma and Spokane, and where in 1909 the great Yukon and Pacific Exposition is to be held in the city of Seattle. Any of the brethren who want to see something extraordinary in scenery, resources, rapid development and unequalled prospects ought to come out here in 1909 and be astonished.

THOS. W. MUSGROVE.

Sultan, Wash.

### SMALL DOSES OF SALICYLIC ACID

For a number of years a bottle of the granules of salicylic acid, gr. 1-6, has lain on my shelf, and it is only in the last month that I have used some of them. I am surprised at the result of the use of these granules in acute rheumatic conditions when given in doses of gr. 1-6 every fifteen to twenty minutes. I know of nothing in all my experience which so quickly reduces temperature and allays pain in these conditions. I never used them before for the simple reason that the dosage looked so small.

My method of treatment in these acute rheumatic conditions is as follows: Colchicine, gr. 1-134 each, two granules three times a day, increasing the daily dose one granule each day until the bowels are purged freely. Then drop back to one granule three times a day, or just sufficient to keep the bowels acting once or twice daily. I sometimes observe some nausea, especially on the day when there is free purging, and during this period I seldom administer any other remedy because the patient is liable to become disgusted with other treatment, never thinking that the nice little yellow pills would occasion any such disturbance. When the bowels have ceased purging give salicylic acid, 1-6 grain every fifteen to thirty minutes. There is always a decrease in temperature and relief from pain. Order warm magnesium sulphate (1:16) baths. Calcium and lithium carbonate compound before each meal with plenty of water following, or perhaps calx iodata, 20 to 40 grains each day.

Leave the patient with a good tonic, and above all, don't forget to leave him with enough colchicine to keep bowels moving regularly.

I have had some cases lately who have been treated with the above who think that I'm a "messenger from God." They'll continue so to think "until recompense is asked."

W. W. BAILEY.

Le Claire, Ia.

[This is not only a practical little article—it's good "horse sense." Dr. Bailey is cordially invited to "call again."—ED.]

### HELENIN

Several times this winter I have given helenin, gr. 1-6 three times a day, in cases of acute bronchitis in the declining stage. Two cases had been on terpin hydrate and heroin, without improvement, for seven and ten days, respectively when I began the helenin. Both cleared up in six days. Two others, which I did not see until late, I put at once on the same dosage of helenin, with similarly rapid improvement and cure.

Another patient took the drug for two days and then refused to continue, stating that it made him worse. This was a chronic bronchitis of thirty years' duration.

Judging by the prompt amelioration of symptoms in these few instances, I believe helenin is a valuable drug and is worthy of extended trial. I shall use it whenever indicated, and report again.

MALCOLM DEAN MILLER.

Boston, Mass.

### FIBROID TUMOR COMPLICATING DELIVERY

I was hurriedly called to see a parturient mother attended by a midwife. She had been delivered of a good-sized baby, full of life, three-quarters of an hour before my arrival.

Something strange, indeed very strange, had happened which the midwife could not understand. The placenta had come down

with another body, and which was nothing else than a fibroid tumor the size of a quart bottle, attached by two roots to the womb.

Now, the thing remarkable in this case is that the placenta and the amniotic sac were attached to the body of that tumor—as high as the neck. Very likely the midwife had pulled on the placenta and detached it, at its border, from the fibroid.

The patient had been bleeding profusely and before I could render her any assistance she collapsed and expired in my hands. I endeavored to tie the tumor as high and as tight as it was possible, but as you can imagine, all my endeavors to save the mother were futile. Hypodermic injections of suprarenalin, strychnine and glonoin were used.

Has anyone ever seen such a case, read of such an occurrence? Could the woman have been saved by any surgical procedure at that critical moment, if she had been attended from the start by a doctor?

F. D. ORBESAN.

Ozone Park, N. Y.

### THUMB-NAIL SKETCH; CHAPPED HANDS; RECTAL TROUBLES

Two very annoying troubles that come to the physician's attention and which are obstinate and slow of cure are the following: First, chapped hands; second, rectal protrusion, piles and hemorrhoidal masses.

For the first, the very best application I have ever used is the following: Wash the hands clean and dry thoroughly. Moisten slightly a cake of "ivory" soap and rub the hands all over freely, filling the chaps and cracks. This smarts at first but soon is analgesic. (In passing, this treatment is fine for slight burns.) Make several applications in case of chapped hands, till the hands are well incased in soap. With light cotton gloves you can now defy the cold and wind. As the soap wears off add more. You will find the hands are more easily washed and keep clean longer. The old black, grimy hands are not present with you as before and the painful cracks that you used to fill with shoemaker's wax and whose

calloused edges required a sharp knife to remove are all a thing of the past.

Now, Mr. Editor, I am not writing an ad for "ivory" soap, and you need not publish the foregoing, but I am giving you a tip: Why not make a chapped-hands soap?

The rectal annoyances mentioned have caused many bad half-hours of suffering and



Dr. Cope at His Desk

discomfort, so that anything coming in this line will be doubly welcome. So many go to stool and have such a time to replace the protruded rectal mass, be it pile tumor or mucous lining, and after vain efforts, pain and bleeding, half walk or creep along slowly back to desk or work with that ever-present burning, stinging irritation that converts saints into sinners. Some use oils and salves, some hot water and some cold water, but all are but makeshifts and none really satisfy.

Reasoning from analogy, I said the rectum is a mucous membrane and in these conditions there is a lack of mucus. I said the saliva is a good lubricant of mucous surfaces,



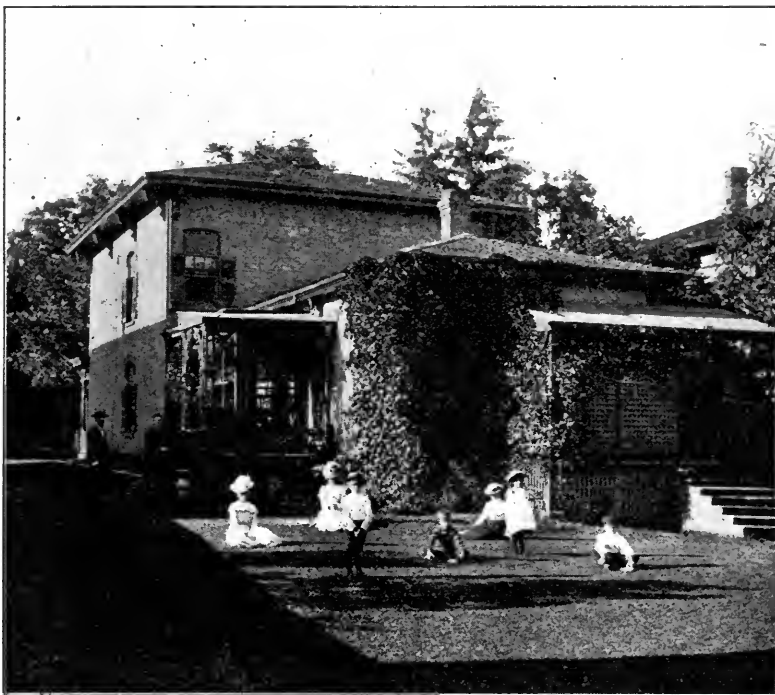
so I directed the patient to take with him plenty of toilet paper, and when through defecating, to moisten the toilet paper well with saliva and with this proceed to make the rectal toilet. As soon as one piece is used throw it away and use fresh and more saliva, using gentle pressure to force the mass up past the sphincter. A half dozen applications of the above will succeed in placing everything where it belongs, and the thanks of your grateful patients will testify to the relief given.

C. S. COPE.  
Ionia, Mich.

[Dr. Cope's suggestions have the merits of simplicity and novelty. Instead of the "ivory" soap it might be well to use one which is mildly antiseptic. Does the Doctor intend to hint at that? The hint for restoring protruding piles and other rectal masses is good. Doubtless some of our afflicted brethren will try this themselves and report results. But why stop with relief only? Most of these cases are readily curable and a little time devoted to mastering the technic will put you in command of the situation. Why not prepare yourself to cure them?

On this and adjoining pages we are happy to be able to show some pictures of Dr. Cope and his family and home. He is very properly proud of that family and well satisfied with the beautiful old house—which to us unfortunates in a great city seems about all that heart could desire. Dr. Cope has intimated to us that he might sell, for the good wife's sake. He is anxious

to seek a more favorable climate. Perhaps some of the "family" would be interested in inquiring further. If we can judge by the "sample" shown us, Ionia should be an ideal place in which to live.—ED.]



The beautiful home of Dr. C. S. Cope, Ionia, Michigan

## MINOR SURGERY IN THE WOODS

In surgery, as in medicine, the practitioner must sometimes resort to expedients, and fortunate is the doctor who can readily and quickly meet emergency cases and render the needed aid. Imagine yourself far out in the wilds of Northern Wisconsin, miles from the nearest railroad station or a town or village where a doctor can be had. You are suddenly called on to handle a case like this, for instance: a long scalp-wound running clear across one entire side of the head, and the gaping wound filled with sawdust, dirt and hair matted with clotted blood; a pair of scissors the only instrument with which to operate; no bandages at hand, no adhesive plaster, absolutely nothing but the scissors

and a tincup from which water can be poured.

With the cup and water the wound is cleansed, so far as it can be done. The scissors are then used to cut away the entangled matted hair, leaving little tufts near

a doctor must be able to meet the demands of these cases. A sharp pocket-knife is the only instrument to be had—nothing else. The patient presents the wounded thumb—no torn flesh, no abraded cuticle, but a black thumbnail, the dark sanguineous fluid show-

ing plainly under at least three-fourths of its under surface. It seems a small affair, but the owner of said thumb cannot work, cannot sit still, but walks the floor in severest pain and begs you to do something for his relief. Grasping his thumb tightly between your own and the index-finger you deftly cut a slight notch crosswise of the nail just at the commencement of the matrix, and



Dr. Cope, his wife and family, his oldest son also a doctor

the edge of and exactly opposite each other on both sides of the torn integument. Crossing these locks of hair, using traction to draw the edges together, they are deftly and securely tied and the patient started to the nearest point where the operation can be properly completed and stitches put in by some one who has the requisite aids for such work. Could this simple procedure have been improved upon under the circumstances? If so, how?

A workman driving nails unfortunately strikes the wrong one, namely, the nail on his left thumb, leaving a wound that under ordinary circumstances would be a simple affair. Six hours later there is an intense pain and urgent demand for relief. What is to be done? You are a professional man, a doctor, and the laity think you must render aid even if you are out in the wilds, miles from the needful accessories, and that

when nearly through the horny substance with the sharp point pierce through to the imprisoned fluid, apply suction with the mouth—letting the patient do this for himself—and presto! what a change. Pain gone instantly. If you were properly equipped and wished to remove the black, unsightly appearance of the wounded member, the use of hydrogen peroxide would speedily do the work.

W. H. H. BARKER.

Harvey, Ia.

#### SAM SQUASH'S REFLECTIONS ON CHRISTIAN SCIENCE

"What is the matter with Christian Science?" said I to my wife. "They seem to be proselyting all over now for that faith."

"The matter with it, Sammie? I think it is the same as always, no matter at all, for that matter."

"Well, I know, Mary, you believe half and half in it anyhow. But let me tell you right here, I don't believe for one moment it is what it is cracked up to be. It may be Christian all right, but I'll be hanged if it is scientific!"

"What makes you touch upon Christian science all at once this morning, Sammie, dear?"

"Well, Mary, I'll tell you. I have been considering the subject very seriously and thoroughly ever since our niece from Boston was visiting us here on the farm last summer, and I have read all those papers she left us. Now, I was thinking this morning of going to church, with you and the children, but really what is the use, as Christian science teaches us there is no sin. So there you are. I believe I am good enough and I simply stay at home. Does not Christian science teach us that sin does not exist?"

"Yes, Sam, but it is only for those that are strong enough in faith and believe that there is no sin."

"But didn't I just say that I believe I am good enough?"

"Sammie, dear, a man that frequently uses oaths is not."

"Mary, I simply don't believe that I do. Well now, Christian science teaches us that the only way to escape the penalty of sin is to stop sinning. But do the old Book and all the churches teach anything to the contrary? We boys nearly always got a thrashing if we did anything wrong enough to be worth paying back for."

"That seems naturally all right, Sam. But Mrs. Eddy was the first woman that ever was inspired to give to the world that most beautiful and sublime faith: that sin is no reality, that God has not created these miserable, shameful, dishonest vipers we all are."

"Hold on, Mary, dear, you are getting eloquent. But look here a minute. Did not God create the universe and all that is in it? Who else did? The Old Harry himself was knocked out in the first round, and I often wondered that he ever had cheek enough to come back."

"Sam, deary, please don't get vulgar. Don't talk that way about Christian faiths."

"It is not the faith at all, Mary, I am after, it is the science, the truth of the whole mess. I think Mrs. Baker Eddy, or what's her name, put a little too much leaven in the loaf she baked, so it got to be too light."

"Sammie, now again! Well you say, too light; good bread must be lightly baked to be digestible, and so it is an advantage to the followers of that cult that they can accept and believe. That is the leaven part of it, the solid part they can't digest themselves even, and nobody else. It has always been a snap to believe, but mighty hard work sometimes to understand. Now, Sam, I do really believe with Mrs. Eddy 'that matter is the error of mortal mind.' There are not supposed to be any real things in this old world. All we see, hear or feel is only imagination. Your niece Maud, of Boston, explained so absolutely clearly to me that it was so certain as that I know I am sitting in this chair."

"But, Mary, dear, are you sure you are really sitting in this chair? Do you feel it, do you hear it crack when you rock, do you see me or are you only dreaming? Oh, look out, Mary, it is a most morbid delusion."

"Well now, Sam, there is no use talking, Mrs. Eddy herself says—and she only ought to know—that matter and its claims to sin, sickness and death are contrary to God and cannot emanate from God."

"Mary, now if this be true then it follows again logically that God cannot be the creator of the universe, and all creation is a great illusory chimera, and all considered-sound humanity must have been entirely 'bughouse' till the arrival of Mrs. Eddy's doctrine. No, don't talk more about it, for your own sake, Mary. I feel sorry for you and more sorry for Maud, because she is worse than you are yet. The poor girl certainly felt provoked when she left us. You know she and I were debating fiercely and she came farther away from convincing me, although I am aware she was well versed in 'scientific christianity.' The culmination came though when I asked her to cure our old mare of mange without drugs, which she did not seem to know how to get at right,

and I asked her if she thought it easier to kill the potato-bugs with mind than parison, and she answered that she was no veterinary, neither was she much of a farm-hand. But she said she could cure all diseases of mankind without drugs, and you remember her assertions, which are all laid down in the would-be reformer's book:

"It is not scientific to examine the body in order to ascertain whether we are in health—because this is to infringe upon God's government." "The remote cause of all disease is mental." "Disease is less than mind, and mind can control it." "Agree to disagree with approaching symptoms of chronic or acute disease, whether cancer, consumption or smallpox." "You command the situation if you understand that morbid existence is a state of self-deception and not 'Truth of Being.'" "The only effect produced by medicine is dependent on mental action." So far her quotations from the 'Koran' of Mrs. Eddy.

"Can you imagine, Mary, how the unnatural assertions struck my 'common sense?' Why, it produced such a bewildering feeling in my mind that I really imagined I was driving the old mare to a death race, she fell and broke her neck. I went over the dash-board, was hurled through a wire fence, tearing my clothes to shreds, crushing my skull on a thick oak stump, lost thinking for a second or two, and when I came to I saw through the whole thing—and thank God it was all a Christian science illusion.

"Now, how about her curing diseases without drugs? She could no more do it than by pulling up weeds with words, even if her 'Koran' asserted that mind 'can control it.'" Do you remember how she exerted herself in trying so cure your toothache, but could not and you finally had to go to the dentist for relief? Did she stop the blood-poison in Johnnie's hand which was produced by a rusty nail? No, the poor boy would probably have died had he not gone to a good physician. But her climax to feel discouraged with me came though the time the hog cholera came around. You remember, Mary, I wanted her to try her 'exalted' influence that time as a veterinary. I could

not see why it was not as feasible to cure my hogs with Christian science as to cure a human being, because as said, 'mind is over matter,' and as a hog has very little mind to disbelieve with but all kinds of matter it seemed logical she should try it, and as it did not matter if she minded not to go to the 'home' of her patients or she preferred to sit in the parlor, 'mind' according to her theory ought to penetrate through all matter, and it would not matter whether she knew what really was the matter with her patients or not; in fact, as stated before, I really do believe she thought it infringement 'to examine the body in order to consider whether it be in health'—'because this is to infringe upon God's government' (Mrs. Eddy's own words). But what does it matter?—'there is no matter.' There are no cholera bacilli, there is no trichinosis nor tubercular meat, there are no contagious diseases, there is no material cause of anything, there are no crazy lunatics—all, all is only imagination, a whole delusory chimera of individual error!

"Good bye, my old friend, thou soundest of all, good 'common horse sense!' You are far behind the times, your imagination is not eccentric enough. Ascend on your sylphian wings above all real things, all worthy 'commonsenseness,' then throw yourself into the abyss of darkest obscurity, where no intellect, no true science has ever been traced, and you may get to be nearer affiliated with this occult sect without knowing the slightest iota about where you are at! Be forever a illusory dreamer, imbibe in the endless nonsense of fantasma, be intoxicated with delusions, never believe in reality, it does not exist, only the unreal, the abstract is the real thing. Everything tangible is just all an illusion. Cut your own throat if it be, and just believe you did not do it, and you shall not suffer any the worse therefrom. This is the fitting philosophy of that preposterous pseudoscience called 'Christian science.'

"That chimera, to believe with all your soul-force that what in reality exists does not exist at all, and that which possibly cannot be, that is the real thing—and there you have it!"

When finally I got through with my attack on that mysticism, Mary felt real physically tired (and I didn't blame her) and she admitted she did not really materially care whether there be any such thing as "Christian science" at all, as she remarked it couldn't even cure a boil or remove a sliver from a finger nor stop the excruciating pain of burns, and it was entirely impracticable, if not even saying untrue to nature and its laws, as she had seen the little ones die from real diphtheria and old and young alike from real pneumonia and the babies tortured from real colic in spite of well-meant "Christian-science" application.

Yes, it seems to me that followers of such a cult must be unfortunately misguided people, with utmost lack of even the slightest scientific understanding of material nature's laws.

We all know that physicians recognize the effect of the mental state upon the development of sickness, and like true scientists they give it its order and relegate it to its proper place and treat it, as necessity demands, either with or without drugs. "Christian science" dupes its votaries with its exalted Ego. When it overlooks the etiology, the course of disease in general and cares not about removing it, it puts its greatest ignorance into high-light. It is undoubtedly a dark spot on the horizon of present educational progress, it is a sneak-thief that gets the advantage over the less acute of hearing and sight—it is a blunder of would-be reformers which it will take years of true scientific light to eluminate bright enough so they will see their own shameful folly reflected upon themselves. It is an insult to intelligence and fills a truly scientific mind with contempt against its most fantastic and silly procedure.

"SAM SQUASH."

Larsen, Wis.

#### HOW DO YOU TREAT GALLSTONE COLIC?

Every month *The New York Medical Journal* gives a prize of \$25 to the physician sending in the most satisfactory answer to

some practical question. This is an excellent feature and some of these answers are splendid and all are most helpful. We were pleased to see in the number for March 28 that the prize-winner in answering the question, "How to Treat Gallstone Colic?" was Dr. Frank B. Kirby of Philadelphia, well known to readers of this journal. We quote it entire, as follows:

"A case of gallstone colic demands immediate anodyne treatment. I give at once chloroform inhalations or a hypodermic injection of morphine sulphate, 1-4 grain, and atropine sulphate, 1-100 grain, repeated in half an hour if necessary; externally the hot turpentine stupe or mustard plaster over the gall-bladder. However, if the case is mild in character, with slight pain, it will be relieved by

Strychnine sulphate... 1-60 grain

Hyoscyamine sulphate... 1-250 grain

Nitroglycerin ..... 1 200 grain

with hot water, repeated every ten minutes to effect, usually three or four doses being required.

"After pain the next most urgent symptom may be vomiting, although this may be slight or absent. If slight, it tends to overcome the spasm of the muscular structure of the duct, and if severe, the drugs already used will tend to correct this trouble.

"A third concomitant symptom is jaundice; this also may be absent. Jaundice is corrected by the use of the hot-pack and fractional doses of calomel, say 1-6 grain for eight to ten doses to aid the emunctories, skin, kidneys and intestines, without the usual subsequent saline, as the liver needs what bile is in the intestines to be absorbed for future use. The saline would cause a diarrhea, and deprive the body of the valuable bile salts.

"We determine the gravity of the situation after relief of its most urgent symptoms. Should we get a hectic temperature with leukocytosis and physical signs of distended gall-bladder, all pointing to pus formation, we urge early cholecystotomy and removal of the stone. Should we decide on its benign character we give palliative treatment. This in effect is prophylactic as well.

"Realizing its pathology we recognize no danger from the concretion *per se*, any more than a bullet encapsulated in the tissues. But as a possible cause of future trouble we determine on (1) the solution of the stone, and equally as important, (2) comparative intestinal asepsis. These we accomplish by the use of sodium glycocholate mass in three-grain doses four times daily, with five-grain doses of sodium succinate during several months. The former is one of the few true cholagog drugs, the latter has distinct value as an antiseptic and solvent for the concretion. Sodium succinate may be replaced by salol or sodium salicylate in the same dose.

"The foregoing deals directly with the stone already formed. But true prophylactic treatment will not only prevent the hepatic colic of existing stones, but prevent the formation of other stones. Gallstones are, chemically, cholesterin and calcium bilirubinate, which are only precipitated from bile, to form stones, by being in excess over their natural solvents, the glycocholate and taurocholate of sodium. This change is probably due to hepatic torpor and intestinal toxemia, due in their turn to constipation and the sedentary habit.

"I have never seen good results from the use of olive oil, and, in fact, restrict fats in the diet, also meat, substituting fruits and vegetables. It is also best to omit tea and coffee, and advise the free use of water. Walking in the open air is of value.

"Exercise, correct diet, intestinal antiseptics with cholagog drugs form the keynote in the prophylaxis of gallstone colic."

#### IS ATOXYL THE CURE FOR LEPROSY?

The patient was a man aged 31, who for two years had shown all the manifestations of leprosy. The form of the disease is trophoneurotic, with pemphigus. The diagnosis was made clinically, a bacteriological examination not being made. Syphilis was excluded.

The treatment was as follows: First to fourth day the daily injection, hypodermically, of 10 centigrams of atoxyl; the fifth

to eighth day, no injection; the ninth to twelfth, 20 centigrams of atoxyl daily; the thirteenth to sixteenth, repose—no injection; seventeenth to twentieth, 30 centigrams of atoxyl daily; twenty-first to twenty-fourth, 40 centigrams of atoxyl dai y.

By this time the patient showed some symptoms of intoxication and some diarrhea, while the cutaneous manifestations were



DR. ENRIQUE COLONNA

worse. I gave him 800 Cc. daily of caffeinated serum by hypodermoclysis, to restore the loss of fluids provoked by the diarrhea. From the twenty-fourth to the twenty-seventh day he was permitted to rest, while the serum was still injected. All symptoms of intoxication disappeared, including the diarrhea and the ocu ar symptoms.

From the twenty-eighth to the thirty-first days 30 centigrams of atoxyl were given daily. Thirty-second to thirty-fifth day repose, cutaneous manifestations much better. From the thirty-sixth to the thirty-ninth 0.20 atoxyl were injected daily, cutaneous manifestations tending to disappear; nodulation greatly diminished. Fortieth to forty-third, repose; the patient is very much better. Forty-fourth to forty-seventh, 0.10 atoxyl daily; much more improvement. Forty-eighth to fifty-first, repose; the anesthesia characteristic of the disease has com-

pletely disappeared. Fifty-second to sixtieth 0.10 atoxyl daily. Patient perfectly well.

I repeat that bacteriological examination was not made. Have I made an error in diagnosis? Syphilis was apparently excluded, but is it possible that this was a case of concealed syphilis? Try this, Brothers. Use only the French atoxyl. It is more expensive but less toxic than the German. I simply report an observation and have told you all I have to tell. Is atoxyl the remedy for leprosy?

ENRIQUE COLONNA.

San Andres, Tuxtla, Mexico.

### FROM AN OLD WARRIOR

I am not writing you for publication, but simply desire to say that I admire your common sense and good judgment, so far as I have seen, in your treatment of various diseases as set forth in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, which is fully in accord with my own and my experience in a practice of over forty years. Notice first your treatment of croup. I can say without egotism that I have never failed to relieve a single case of croup. I always order immediately a cold-water-compress to the throat with a double thickness of flannel over it, then give a small dose of spongia every half hour until fully relieved.

Since I have used calx iodata in laryngitis I am satisfied it is of great value. I may say that I treat measles with cold instead of hot drinks, which many physicians consider the only correct method, but I have never lost a case of measles in all my practice. I want to say that of late I have had some severe cases of acute laryngitis and have been surprised with the action of the calx iodata, having cured the worst cases within twenty-four to thirty-six hours.

A word as to hyoscine-morphine-cactin compound. I believe it is the finest combination both as a soporific as well as an anesthetic ever offered to the medical profession. I do not see how anyone can have bad results from it unless he is very careless in its administration. I have given chloroform in thousands of cases without any bad

results, but I believe the hyoscine-morphine-cactin compound is decidedly safer and better in every way. I have used morphine for years as a soporific without any bad effects in any way, but always kept within safe limits. My way of using has been to put 1-8 or 1-4 grain into a half cup of water and give of this one teaspoonful until I receive the effect desired. In this way I have quieted pain, given a good rest to the patient, and no habit was formed. I use hyoscine-morphine-cactin in a similar way, dissolving one full-strength tablet in two or four drams of water and giving it as needed, thus avoiding any possible ill effect. I do not use the hypodermic often because many fear the needle.

I am more and more convinced that a large proportion of physicians give too much medicine and are not careful enough in their diagnosis, jumping at conclusions too quickly and prescribing with too little thought of the effects.

I am glad to know that the editor of *CLINICAL MEDICINE*, in his comments, can be depended upon to set right, when necessary, these writers on the treatment of the various diseases. You are doing a grand work in the department of medicine and in your departure on the lines of alkaloidal dosimetry. God bless you, Doctor, in your work.

I like your idea of a *CLINICAL MEDICINE* Postgraduate Correspondence School of Therapeutics, although I do not know that it will pay me at my age—seventy-five last June—to take it up. I am keeping up with the times as well as I can, using the best I can find.

I don't think you have a better treatment for pneumonia and dysentery than I have, for I have never failed to cure quickly and surely either of these in my long practice. Still, there is much that I can learn of value as to other diseases.

I am pleased with your journal and have already gathered quite a deal of honey from its perusal. If I never got anything out of my introduction to your alkaloidal methods than the information about hypodermic anesthetic and calx iodata I should feel well

repaid. I believe the best of anything is none too good for any physician who desires to help his patients in the quickest time possible, and any physician or surgeon that does not desire such help is dishonest in his profession and unworthy to hold the position. One other incident connected with your journal just now comes to my mind. A young lady recently came into my office with enlarged tonsils. One of our local physicians has been urging her to have them sliced down with the knife. I told her never to allow such a thing to be done. I think, if I remember rightly, you some time ago denounced such procedure, and when I read it I said "Amen," and thought, "Well, that is the kind of editor for me." So you see you and I do agree in some things, if not in all.

And now I feel that I have intruded upon your time more than I ought to. But I felt just like telling you just where I stand in these matters and still am your well-wisher and glad to make your acquaintance and glad to have you know that I appreciate your efforts.

CLINTON D. WOODRUFF.

Reed City, Mich.

#### A PLACENTAL ANOMALY OCCURRING WITH TWINS

On the morning of Oct. 20, 1906, I was called to see a Mrs. Wm. D., 16 years old, and in labor. She was small, weighing about 90 pounds, with a small pelvis. The pains came on regularly, but without advancing the child, which was a breach presentation. I found it necessary to use my forceps and delivered a seven-pound baby. On examination I found another child's head in vertex-presentation. I again had to use my forceps to deliver the child to save the woman. Now, here is what I wish to call attention to. On further developments I found two afterbirths, joined by a cord about one foot long, the same size and shape of the cords attached to either of the children, thus making three cords instead of two. I have been in the practice of medicine for nearly forty years and this is the first time I

have ever seen three cords when twins were born.

I have been using the alkaloids for the last year or so and am well pleased with them.

J. K. SIMMONS.

Nace, Va.

#### SUCCESS IN A DESPERATE CASE OF PNEUMONIA

On March 13 I got a call to see a boy. After examining him I found the whole right lung in a state of red hepatization; temperature 105.7° F., pulse 130 and strong and bounding, respiration 62, cheeks mahogany-color, lips cyanotic, pupils dilated to the size of a split pea, and patient delirious. He had been sick since Friday, March 9. The parents thought it was only a hard cold, and didn't think much of it until he began to spit blood and tried to run away, fight, swear, and the like, as if he were in delirium. Then they were frightened and called me. I told them that, to my understanding, the boy would be with them on this earth only for a couple of days, and outside of quieting him, didn't want to treat him, as I thought it was useless. But as I went to my satchel for Waugh's anodyne and calmative, I thought, "Here is a good chance for me to test the alkaloidal treatment of pneumonia." So I pulled out my little pocket granule case and took: Thirteen granules of aconitine, gr. 1-134, thirteen granules of digitalin, gr. 1-67, and five granules of strychnine arsenate, gr. 1-30. All of these I dissolved in twenty-four teaspoonfuls of boiled water. I then wrapped his chest in dry woolen blankets, and applied boiling-hot-water compresses every half hour, until quite a perspiration started, six changes being sufficient. I gave him the aconitine mixture, one teaspoonful every fifteen minutes, attending myself, as I was afraid to trust his parents; then I watched the physiological action of the drugs, myself. After one hour and a half, or six doses, his temperature fell to 103.7° F., pulse to 109, and respiration became stertorous and he began gasping for breath.



I then dissolved six strychnine nitrate hypodermic tablets of gr. 1-40 in twenty-four teaspoonfuls of water, and gave one teaspoonful of this every half hour, and the aconitine mixture every half hour also, with a granule of emetine, for two hours, when his respiration became more uniform and 45 a minute, temperature 102.5 ° F., and pulse 105. Becoming more satisfied, I wanted to leave, but the parents begged me to stay longer, so I stayed, giving as before. After staying with him for five hours and attending as I did, even his parents didn't object to my leaving.

Before leaving, I gave him one tablet of calomel, gr. 1, sodium bicarbonate, gr. 1, pulverized ipecac, gr. 1-10, and directed to give him one tablespoonful of epsom salt six hours afterward, and the sulphocarbolates in solution, 2 1-2 grains to a dose, every two hours, aconitine compound every hour and a half, strychnine nitrate solution every three hours, and to change the blanket every six hours with hot compresses.

Next day, at the same hour, the temperature was 103° F., pulse 100, respiration 32, the patient expectorating thick, bloody mucus. The parents told me that he slept for a couple of hours in the morning, asking for something for breakfast; when it was given, he could not eat. All the time he was given egg-nog and white of egg dissolved in a pint of cold water. I ordered emetine every two hours, and aconitine every one-half hour during hyperpyrexia, and only every two hours when remittent, with strychnine nitrate solution every three hours; sulphocarbolates every four hours, as the bowels were not offensive any more.

Next day at the same time I found him with a temperature of 100° F., pulse 85, respiration 32, appetite improving, expectorating freely, and a happy result in view if the left lobe would not get involved. The following day at the same time the temperature was 99.4° F., pulse 85, respiration 32 but deeper, and the boy on improvement—road right along. Seven days of my treatment saved his life. Say what one may, with a treatment different from that of the alkaloidal method he would have succumbed

to the disease in less than twenty-four hours when I first saw him.

I am very grateful for the chance I have had and more so for the enlightenment on the subject through the columns of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* or *THE ALKALOIDAL CLINIC* of old. Had I known two years ago what I know now, my daughter of the tender age of fourteen would not have had to die for want of the proper treatment. Even though six of us had been treating her in pneumonia for twelve days and with the greatest care one could have, she died because none of the medicines given suited her case. Alkaloids to everybody now and in the future will be my treatment as much and as fast as I may be able to master. I have two more cases of pneumonia, but not of such severe type.

L. A. BAZAN.

Ashley, Mo.

#### A FATAL CASE OF PNEUMONIA

I should like very much to have your criticism on the treatment of the following case.

On February 8 the father came to my office, asking treatment for his son, two years of age, who had a cold and cough and was feverish. I gave pink calomel, gr. 1-10, to be taken every half hour for ten doses, followed by 2 drams castor oil; also aconitine gr. 5-134, emetine gr. 1-12, in 2 1-2 ounces water, 2 drams to be given every half hour for six doses, and then every three hours. The next day the child was reported to my office practically well. On February 27 the father came again to my office, saying that the child was sick again, and asked for and received a repetition of the above, and after two days he again reported the child much improved.

In both cases I pointed out the danger of treating the case without seeing the patient, and spoke of the danger of its being pneumonia, but was assured that the child was not much sick and that if not quickly restored to health, I would be called at once.

On March 2, 10 a. m., I was called in a hurry and found the temperature 103° F.

in axilla; pulse 180; respiration 36; suppressed cry; cough tight and painful; very marked frown; child pale; eyes dull and sore, but pupils normal in size; gums sore; flatus from bowel offensive; dulness over lung, quite marked between scapulæ. I gave calomel, gr. 1-6 every twenty minutes for six doses, followed in an hour by castor oil; also aconitine gr. 3-134. Defervescent compound, No. 3, emetine gr. 6-67, atropine sulphate gr. 1-250 in 3 ounces water, 1 dram to be given every half hour till fever went down to 100° F., then every two hours to normal. Temperature at 8 p. m. 103.2° F., and at 11 p. m. 102° F.; pulse 140; respiration 50 but less painful; cough quite loose; pupils dilated. I painted the chest with tincture of iodine, U. S. P., and applied antiphlogistine over the chest. I gave nuclein, two-drop tablets, twice daily. Intestinal antiseptic, gr. 1 every hour. Continued the fever mixture after adding digitalin and brucine.

March 3, 1 p. m., I found the child cyanosed, respiration impeded by phlegm, but little cough. Stopped the emetine, and gave sanguinarine, gr. 1-250 every hour till cough would increase. Repeated the calomel, but followed it with saline laxative instead of the castor oil. Inserted quinine, gr. 3 in capsule, into bowel every eight hours. Continued the nuclein and sulphocarbolates. Repeated the antiphlogistine.

I was called March 4, at 10 a. m., in a great hurry. Found child suffering from the most intense toxemia, also cyanosed. The sanguinarine, though stimulating cough at first, was having no effect now. Bowels had moved about three times each day and were quite free. Feeding had been judicious, food consisting of milk and white of egg well diluted. The temperature of the room was kept at 70° F. and room was well ventilated, but no draft reached the child. The air of the room was kept moist with steam. The child received the best of care and nursing, a clinical thermometer being used every two to four hours.

When the child became cyanosed, aconitine and veratrine were stopped and strychnine given instead of brucine. The tem-

perature ranged during the two-days' illness between 101° and 103° F. During the last day I remained with the child until its death at 8 p. m. On first arriving in the morning, I put the child in a warm bath and dashed cold water on the chest, continuing to do so for about seven or eight minutes, and then wrapped the child in a warm blanket.

If I erred, where was my mistake? This was my first death from pneumonia in four years since using the active principles, one of the cases being a man of 88 years. I still feel that I should not have lost this one, and should like to know better for the next time.

I may add that I visited the patient, in all, five times and remained with the child during the first half of each night, directing the treatment very minutely. During the last five hours I did not outline treatment fully, but everything I did failed to remove the toxemia, which was increasing in spite of all my efforts. Glonoin was used and saline laxative in abundance, also colonic flushing. Should I have bled the little one and injected saline solution? I thought of it, but he was a delicate little creature and I had always reserved bleeding for the robust. The medicines by mouth were all given in solution, excepting the calomel and nuclein, which were given as candies.

V. S. ERNST.

Bridgewater, N. S.

[Frankly, I do not feel that I can criticize this case with justice to yourself. The improvement which followed your first treatment showed that it was correct. The relapses indicated continued reinfection, and I think that the house probably, and the child's mouth certainly, were the seat of virulent cultivation of the pneumococcus. Possibly if the house had been completely renovated and fumigated and the child's mouth perfectly disinfected, things might have been different. Your treatment was correct. The child died from continued reinfection.

There never will be a time when human beings will cease to die from diseases usually curable. Therefore we must expect an occasional death. There is a wide difference

in the power of human being to sustain the attacks of disease, and many will die from infection which others could have safely withstood, and I have long since learned to associate malignancy of infectious attacks with bad hygiene of the house and vicinity. In one case a malignant visitation of diphtheria ceased when we discovered and removed a dead rat from the hot-air flue. Palier claims that the pneumococcus acquires malignancy by passing through the mouth and the evidence he adduces justifies the suggestion—Ed.]

### DRUG AFFINITIES

The following excellent suggestions are taken from a little article in *The Therapeutic Record* by Dr. M. G. Price:

Mouth, mucous membrane and salivary glands: Pilocarpine, phytolaccin, mercury, iridin.

Schneiderian membrane: Atropine, potas. iodide or bichromate.

Pharynx: Phytolaccin.

Larynx: Aconitine, collinsonin, potassium bichromate.

Oesophagus: Veratrine.

Trachea: Sanguinarine nit.

Bronchi (smaller): Tartar emetic, ipecac, lobelin.

Pulmonary mucous membrane: Calcarea carb.

Stomach: Arsenic, boldine, strychnine, potas. bichromate.

Small intestines: Colocynth, ipecac, baptisin.

Pancreas: Iridin, iodine, mercury.

Colon: Potass. bichromate, mercury bichloride.

Rectum: Aesculin, collinsonin.

### SPECIAL CENTERS

Mastication: No drug known.

Deglutition: Anemonin.

Salivary: Iridin, pilocarpine, mercury.

Vomiting: Ipecac, lobelin, apomorphine, tartar emetic.

Sneezing: Alum, aralia, tobacco.

Dilatation of pupils: Atropine, salicylic acid, santonin, adrenalin.

Respiratory: Aspidospermine, cactin, hydrocyanic acid dil., tartar emetic.

Vasomotor: Aconitine, veratrine, glonoin.

Perspiratory: Pilocarpine, picrotoxin, atropine.

Defecation: Collinsonin, podophyllin.

Micturition: Cantharis, gelsemium, nux, santonin.

Emissions: Phosphorus, avena sat., gelsemium.

Erections: Cantharidin, damiana, phosphorus.

Parturition: Caulophyllin, macrotin, ustilago, secale.

Hepatic: Nitrohydrochloric acid, mercury, podophyllin.

Serous membrane: Bryonin, apocynin, sourwood.

Mammary glands: Phytolaccin, pilocarpine, saw palmetto, bryonin.

Castor oil should never be given to lying-in women on account of its power to produce mastitis by engorgement of the lacteal ducts.

### CHELIDONINE IN CANCER

I want to contribute my little unit to the knowledge of the use of drugs in cancer. I have not cured any of my patients, but my small experience is encouraging, so much so in fact that I believe eventually a cure will be found.

My first experience was an almost moribund case of cancer of the pylorus, a large tumor being palpable beneath the abdominal walls. Having read of a suggestion (in alkaloidal literature) of injecting conduragin directly into carcinomas, I suggested to the consultant that we try it in this case, with strict antiseptic precautions. He would not consent to this and his influence was all-powerful. He made the same excuse as other physicians make, that they are afraid that it would release too much poison into the system and thus overwhelm it with a cancerous toxemia.

I did however persuade him to let me try conduragin and chelidonine by way of the stomach. The experience here was not a fair trial, but it seems the chelidonine did ease the pain and brighten the patient for the short period he continued to live.

Case 2. A cauliflower uterine cancer in which chelidonine had no perceptible effect.

Case 3. Cancer of esophagus near the stomach. When this patient first came under my treatment he could not swallow, regurgitated his food, suffered great pain, was terribly constipated, although he had had no medicine for a few weeks prior. Was passing ribbon-shaped, tenacious, putty-like stools which were difficult to remove even with enema or finger.

I started him on chelidonine granules, one four times daily, to begin with, gradually increased to sixteen daily (four times four). Used it cautiously, but no bad symptoms were noticed. I had tried to pass an esophageal bougie at various times, but was at first unsuccessful as I was afraid to use

force, but had to try something, as he was getting no food into the stomach. Chelidonine was dissolved on the tongue to get its local effect, if any.

The patient soon brightened up, pain was relieved in a few days, and he talked about going to work. It also seemed that the chelidonine had a softening effect upon the stricture, for I was gradually able to get a sound into the stomach. The size of the sounds was cautiously increased until I had a pretty good opening. The patient remained in fair health for a few months after this treatment although he had been under my care only a month; however he neglected himself thereafter, drinking heavily, and when I saw him again he was back to his old condition. He died before I got another supply of chelidonine.

Case 4. Cancer of the stomach, as indicated by a test of stomach-contents. The patient never vomited, did not even vomit blood toward the end of life, as some do. The tumor, which showed later on, may have been about the colon, pancreas or spleen. I don't know which, but was inclined to think it pressed on the transverse colon very early in the disease, because in this case the stools passed also were ribbon-shaped. Pain was intermittent but intense and resembled attacks of true colic.

This patient had all kinds of treatment before he came to me. A specialist advised methylene-blue, which treatment was faithfully carried out, but with no encouraging results. As soon as I got another supply of chelidonine I gave him some of the granules and advised eight per day (four times two) to begin with. By some mistake he took sixteen a day (eight times two), which was followed by such immediate and marked improvement that the patient went back to work after being at home four months, and his family expressed the hope that perhaps it was not cancer. Then it was found that fourteen granules (seven times two) per day acted best. Pain ceased almost entirely, although there always remained a tenderness over the tumor. The size of the latter certainly did decrease, the patient gained in weight and color, and constipation and rib-

bon stools gave way to regular dark-brown feces. Improvement continued until my two-months' stock of chelidonine granules ran out. He was then put on conduragin, both by mouth and hypodermically. He gradually grew worse and eventually died. Toward the end I resorted to morphine, but it did not act nearly as well as chelidonine in subduing the pain.

Perhaps there is nothing unique in this account of my cases, but I am sure this information will assist others in getting at the true therapeutics of the active principles.

Case 5. In this case the hypodermic injections of conduragin, 1-67 grain each, three in number, at intervals of three days, were given after my supply of chelidonine had become exhausted and the tumor had grown very large. These injections were made with a strong needle through the abdominal walls and into the firm structure of the growth. No improvement or bad results followed, showing that this treatment is not necessarily fatal as my colleagues prophesied, for I ceased the injections fully one month before death ensued.

Cases No. 3 and 4 passed ribbon-shaped stools, showing a stricture, although in each the stricture was high up. In both instances these stools were of a clay color, which improved under the chelidonine.

Case 6. Patient sick six years. The intense pain was the only thing that pointed to cancer. According to every authoritative description he had no cancer, nor did it seem probable to me. However he did have coffee-ground vomit (for the first time) one week before he died. During the seven years of his illness nothing gave this patient as much relief as chelidonine. I had this patient about one year, and as he was accustomed to changing physicians every few months, I feel that the chelidonine did act beneficially at least in this case.

What may we learn from these experiences? I think that chelidonine has a dissolving action on the fibrous structure of the growth. This is possible, and hence we must be prepared for toxemia, which you combat by nuclein. Chelidonine acts like thiosinamin, and I see that you have that

in your formula. Perhaps cancer will have to be fought on this plan.

Let me add that every case that I have here mentioned was positively diagnosed as cancer, which might be guessed by the invariably fatal issue.

Whatever caused the clay-colored stools in the foregoing cases I do not know, but as chelidonium changed this, perhaps it also acts on the liver as Ellingwood suggests.

The patient, case No. 4, who had a stenosis of the eustachian tube, complained of buzzing and noises in a slightly deaf ear while taking chelidonium. Perhaps this was due to a softening action.

JOHN KETTERLE.

Brooklyn, N. Y.

#### DEATHS FROM THE H-M-C? A REPORT AS PUBLISHED AND THE FACTS

In its report of the last meeting of the Idaho State Medical Society, *The Medical Sentinel* published the following:

"Personal Experience with Hyoscine-Morphine-Cactin Anesthesia:—Dr. J. M. Taylor, Boise, in reading this paper, claimed only a very limited experience. Abbott's H-M-C tablets were used in all his cases. In three of four surgical cases he found its use to greatly lessen amount of chloroform required, the pre-operative distress and excitement were prevented, post-operative excitement and restlessness were practically eliminated and there was very little nausea and no tendency to post-operative hemorrhage. In his obstetrical practice had used half-tablet doses, at intervals of three or four hours, as he thought it indicated, and all patients had become quiet, resting or sleeping between pains, slight lengthening of intervals, seeming improvement of contractions, and no noticeable increase of asphyxia of child: and thinks the benefit to the mother far outweighs the slight possible danger to the child.

"Discussion: Dr. John Boeck had had only limited experience—not sufficient to form a definite opinion. So far he was very well pleased with its use, though he had used the hyoscine and morphine without the cactin.

"Dr. Kellogg knew a case where operation was contemplated for obstruction of the larynx, where ether and chloroform were thought to be contraindicated. A single tablet of H-M-C was given hypodermically, followed by almost immediate death, and in his opinion the tablet caused the fatal result.

"Dr. Stewart had used this tablet in several cases and had felt more or less indifferent toward the combination until he used it in a case of bronchial asthma, when one dose relieved the attack and also prevented the nausea, which usually follows morphine alone.

"Dr. J. H. Bean reported three cases, one amputation and two abortion, with perfect results from the use of H-M-C.

"Dr. Niles thought the efficacy of this compound very doubtful, and from the conflicting reports, asked how are we to know where we are at?

"Dr. Brandt called attention to a death reported recently in *The Journal of the American Medical Association*.

"Dr. Hinman reported knowledge of three deaths from this anesthetic, occurring in Davenport, Iowa.

"Dr. McDaniel said he had tried it in one case, with unsatisfactory results, though patient did not die.

"Dr. Prinzing had used it in a case of inoperable cancer, with relief of pain, but it made patient crazy afterwards.

"Dr. F. W. Compton had used H-M-C in eight obstetrical cases, with three babies showing asphyxia.

Dr. G. E. Shawhan said he thought the ill-effects from H-M-C were due to an idiosyncrasy on part of patient for one of the drugs.

"Dr. Root also spoke of idiosyncrasy to effects of hyoscine which seemed to be increased by addition of morphine, and cited cases in his own practice. He did not approve of giving morphine in confinement and felt sure the child could be killed in this way.

"Dr. Haley's limited experience with H-M-C had taught him that the drug should be used with great caution.

"Dr. McCalla, after reading many favorable reports, especially from Europe, had tried H-M-C in one case of abdominal surgery with very disagreeable symptoms during the anesthesia, followed by vomiting and other post-operative disturbances. The one experience had frightened him away from further use of the drug.

"Dr. Taylor thought the idiosyncrasy was usually due to the hyoscine. In regard to the asphyxia of child, he had found asphyxia in fully fifty percent of cases where H-M-C was not used.

On receipt of this report we at once set about an investigation. The Dr. Kellogg mentioned proved to be W. R. M. Kellogg, of Seattle, Wash., from whom we have received a letter from which we make the following quotation:

"The case which I reported at the meeting of the Idaho State Medical Association was of a woman who was a patient of Dr. Ivar Janson, Eitel Bldg., Seattle, Wash. Dr. Janson referred this woman to a specialist, Dr. Hemmeon, 704 Alaska Bldg. of this city, on account of a growth in the larynx. Because of an obstruction they proposed to do tracheotomy and gave her one of your tablets as an anesthetic. She died immediately, and both physicians believe that the tablet was the cause of her death."

(Signed) W. R. M. KELLOGG.

However, Dr. Janson contributes the following:

"The patient, Miss Martison, was suffering from a carcinoma of the larynx and I decided to perform tracheotomy to relieve the dyspnea. I ordered the nurse to give one of the tablets of H-M-C compound two hours before I came up and one repeated half an hour before. The respiration had been carried on with great effort before this, and consequently when narcosis was induced and no one to watch the patient the voluntary effort at breathing ceased and the result was suffocation. When I arrived the patient was dying. I hastened to the operating room and opened up the trachea, introducing a tube and using artificial respiration, but in vain, as the patient had expired on the way to the operating

room. This can in no way be attributed to the use of the tablets. It was purely a matter of narcosis induced and suffocation resulting, as much so as any form of mechanical strangulation would have been."

(Signed) IVAR JANSON.

Up to the time of writing we had not been able to secure a report from Dr. Heinman, but Dr. Kellogg is evidently mistaken in so far as the assertion that *both* the physicians attributed the death to the anesthetic.

Dr. Compton, in a letter to us, supplies a bit of evidence which singularly enough was omitted from the report of the meeting; and that is, that none of the children who showed asphyxia died.

Dr. Hinman was located as F. Hinman, M. D., of Spokane, Wash. From a letter from him to *The Medical Sentinel* we quote the following:

"At this meeting I reported knowledge of three infant deaths in other men's practices at Davenport, Wash., following the administration of the H-M-C tablets to the mother during confinement. The three deaths I stated occurred shortly after birth, two days in the longest case, from asphyxiation, and the tablet was held responsible for the fatal outcome in each case. Dr. Abbott has been misled by the printer's error in reporting the deaths from Davenport, Iowa. No doubt Dr. Abbott can learn of still other fatalities that have occurred following the use of this anesthetic, should he care to send to Davenport, Wash. 'again to investigate.' However, I have written knowledge about which there can be no mistake for the statement in regard to the three cases in dispute."

(Signed) F. HINMAN.

Two other journals besides *The Sentinel* published this report in identically the same language, and all gave the address mentioned by Hinman as Davenport, Iowa. It was not a printer's error, nor could we be expected to know that some other Davenport was intended, especially since it was not located in the state whose Society was meeting. We have, however, located two of these alleged cases, in the practice of Dr. H. J. Whitney, of Davenport, Wash.

We quote from a personal letter from Dr. Whitney:

"I have had two deaths in infants which I attributed to the H-M-C tablet. One was a case like this: First confinement, woman 22 years old. I gave her one No. 1 some six hours before confinement; she labored well and hard, pains steady—I thought everything went beautifully; child born naturally, but asphyxiated. I brought it around, but it only lived about twenty minutes; went into a spasm and died. When I went to see the mother she was nearly pulseless, and I worked with her for four hours before I brought her out of it. Now this was six hours after the No. 1 was given. My other case was similar, only I used No. 2 and gave two hypodermic injections, three hours apart. Normal labor; child asphyxiated and died in about one hour. Dr. Moore lost one the same way, so he reported to me. Quite a number of doctors here have had the same results, and we are afraid to use them very often; still I am using them, but in much smaller doses. A No. 2 I use in two doses. I really like them, but think they should be given in small doses in obstetrics, much more so than they have been."

(Signed) H. J. WHITNEY.

Thanking Dr. Hinman for the suggestion to investigate in Davenport, Wash., we have done so. We have written to Dr. Moore, asking for particulars as to his case, also to every other physician in Davenport, Wash., in order that we may not lose the opportunity of recording any deaths that may possibly or probably be assigned to the H-M-C. Dr. Moore's should be the case which Dr. Hinman mentions as having died two days after the birth. The details of such a case would be exceedingly interesting. Hyoscine is so rapidly eliminated that not a trace of it can be detected after the third urination of the infant following the administration of the tablets to the mother during labor; hence if this death were due to this combination, it must be attributed to the morphine.

But Dr. G. W. H. Moore, of Davenport, Wash., contributes the following data:

*"So far as I know there never has been a death in this locality that could in any way be attributed to the H-M-C. I have used it in sixty-two obstetric cases and twenty operations, with only the very best results; and expect to continue its use."* Further he says: "I think it can be shown that the cases in which Dr. Whitney blames it were both premature births. The third case mentioned did not occur in my practice."

(Signed) G. W. H. Moore.

Dr. R. P. Moore, also of Davenport, Wash., writes as follows:

"I know of no deaths that have occurred from the use of the H-M-C tablets by asphyxia, but doctors tell me that they have had trouble in getting some of their babies to breathe. As for my own experience, I have only used it in two cases. In the first I only used one-half tablet and the child breathed in a short time; in fact I have had a number of cases where no tablet was used, when it was as long before the child breathed as in that case, so I paid very little attention to it. In my second case I gave one tablet and when the child was born it was apparently dead, but after working heroically and using every means known to me for, it seemed, at least half an hour, I finally resuscitated it. I then and there laid my tablets to one side, and swore that I never would use them again in my confinement cases. I believe they are all right in minor surgical cases."

(Signed) R. P. MOORE, M. D.

It is well known that asphyxia is not an infrequent occurrence after confinement, even when no anesthetic whatever has been used, and that in a certain proportion of cases it is fatal. Consequently we can only attribute asphyxia to the anesthetic where the symptoms unmistakably point to the latter as the cause, or when such fatalities occur in larger proportion than when no anesthetic is used, or when some other one, such as chloroform, has been used. It is therefore not by the study of isolated cases, but by grouping them in masses, that we can get as the exact truth in this matter. We therefore refer our readers again to the report of Gauss, published in CLINICAL

MEDICINE last May. In one thousand labors conducted under this anesthetic method, twenty-nine infants died. Not one of these deaths could Gauss attribute to the anesthetic. In one thousand cases previously attended without this anesthetic, forty-nine of the infants died. It will be seen, therefore, rather than the mortality of infants being increased by the use of this anesthetic method, a decrease occurred so marked that no one can reasonably object to its being credited to the anesthetic.

These cases must therefore be recorded as deaths from asphyxia *after* the use of the H-M-C anesthetic, but so far no evidence has been given to show that this was the sole or even a contributing cause of the children's death. We again appeal to Dr. Hinman to aid us in locating that remarkable third fatal case, and the others at which he hints. It looks as if he had allowed himself to quote rumors as undisputed facts, in a manner calculated to throw discredit upon a therapeutic method and its advocates.

More than three millions of the H-M-C tablets have now been placed in the hands of the medical profession in America, and as yet we await for the first evidence of a single death unquestionably to be attributed to this anesthetic. We have never made any claim that no deaths could possibly result after its use, nor that so powerful an agent, used by all sorts of physicians, with all degrees of recklessness, could not under any conditions possibly determine the death of the patient. We are waiting, and willing, to record such a death when it is reported. But according to H. C. Wood, Jr., there should have been several hundred deaths at least, following on his average of one for every 221. There is evidently something wrong somewhere. In the meanwhile we may with edification turn to Prof. Littig's investigation of anesthesia fatalities in the State of Iowa. If seventy-seven persons died from the effects of chloroform and ether in that State, how many died all over the United States?

We do not minimize the importance of care in giving the anesthetic combination during labor. In beginning the use of this

combination the doctor should depend, at first, upon the half-strength tablets. Bear the following suggestions in mind:

1. Try caulophyllin for the "false" or "nagging" pains; if this fails, try one half-strength H-M-C tablet.

2. For *true* labor-pains withhold the H-M-C till the os is dilated, then give the half-dose tablet, repeating the dose only when the head rests on the perineal floor.

3. Do not give more than two half-strength tablets within six hours, except to secure much-needed relief during the expulsion of the head; in such a case inject a tablet and try to effect delivery within five minutes.

4. In ordinary, typical cases, a half-strength tablet given when os is fully dilated and another half-strength tablet as the head reaches the perineum is all that is needed; if progress is rapid, the single tablet, first given, will be enough.

5. Attend to the child personally and see that it is breathing normally before leaving it.

W. C. ABBOTT.

Chicago, Ill.

#### PERTINENT FACTS ABOUT APPENDICITIS—ONCE AGAIN

In reading CLINICAL MEDICINE for January I was impressed with the fact that although much had been claimed in advance for this particular number, it more than made good. "Pertinent Facts About Appendicitis," by Dr. A. L. Blesh, of Guthrie, Okla., claimed my attention above all others for three reasons: First, he is an Oklahoma product. So am I. Second, he advocates surgery in all suspected cases of appendicitis. I am almost ribbed up to the point of denouncing surgery in any case. Third, he classes the medical treatment of appendicitis the same as no treatment at all.

I claim, and can deliver the goods, that surgical treatment of appendicitis, in the great majority of cases, is worse than no treatment at all, and so far from being justifiable, is actually criminal.

I offer no apology for taking up this subject. It is the one thing above all others (the removal of ovaries possibly excepted)



that demands the earnest attention of the true doctors throughout the country. I do not claim that all are dishonest in their opinions, but it is a lamentable fact that all with whom I have come in contact are hard to convince.

If the profession will not be educated, then the true physicians must educate the public.

All textbooks and all schools that I know teach that operation is the only thing. Then is it strange that practically all physicians, and particularly those only a few years out of school, look no further for the relief of all appendicitis patients?

Dr. Blesh asks, "Do we know all about it?" This is a very pertinent question under the circumstances. I conduct a small private hospital, and the nonoperative treatment of appendicitis constitutes a large part of my work. I do not claim to know all about appendicitis, but as I have had more experience than probably a dozen busy general practitioners, and as it is this class whom *CLINICAL MEDICINE* serves, I do claim to know something about it.

I go further, and without fear of being accused of egotism, I claim to know more about it than any surgeon who cuts out every appendix that is unfortunate enough to be brought into his court, without being proved guilty. Why inflict capital punishment, the limit, without conviction, without trial? Would any free-born American knowingly submit to this with his life and liberty? We think not, but this is exactly what they are doing with an important part of the body.

The appendix has a purpose. If not, it would not be in everyone. But why discuss this point? I also claim that practically all cases can be cured, all in my experience up to the time of this writing, and he who destroys all of them does not know whether they can be cured or not, hence my claim to know more about the subject than the surgeon. Is this illogical? If so, will some brother please point out the error and set me right?

Dr. Blesh bemoans the high rate of mortality. I agree with him that 2 percent should be enough. According to my own

experience it should be much less. It has been, and is, less, but—not by the knife-route.

My observation on cases treated surgically indicates that the mortality is not far from 10 percent in cases that were not very sick—such a case as he presents in his own daughter; but where the patient reaches the hospital very sick the death-rate is well up toward 100 percent; so near the maximum percentage that operation in such cases is little less than manslaughter in some degree.

Our friend, in stating a proposition, uses these words: "The death-rate of appendicitis, untreated or treated medicinally alone, which amounts to the same thing, is 20 percent." May I ask where he got his information?

I repeat that since the beginning of my attempts to cure appendicitis, medicinally, I have never had a death. This, to the average physician, sounds like a lie out of the whole cloth. I do not like to make the statement, but unfortunately for my reputation as a truthful man, I can not say otherwise without lying. In general practice, in consultation, I always opposed operation for appendicitis and, together with the family physician, we always made good. In my own practice I always made good, but in the latter cases I never allowed it to reach the stage that I would call it by such a fashionable name. I have cases in this community dating as far back as 1898, which will offset the often-repeated chirp that cases treated medicinally will recur. A corn will return after removal from the same cause that first produced it.

As our friend, Dr. Blesh, is at the head of a denominational hospital, and the writer is owner of a private hospital several times smaller, but a hospital on both sides of this controversy, nevertheless—let's have something disinterested. About two years ago the following appeared in *CLINICAL MEDICINE*:

"Appendicitis in the French army: The nonmedical-treatment-of-appendicitis dogma has received a severe jolt from the recent report of the French army hospitals. Of over 600 cases nearly 400 were treated medic-

inally, with a mortality of less than one percent; of the remainder, treated surgically, the death rate was over eleven percent."

Did Dr. Blesh fail to see this? He has been a contributor, and presumably a reader, of this journal for several years. Then why did he not take issue with this article, and at this time?

Our friend advises each doctor so to educate his clientele that a pain in the abdomen, "it may be anywhere or everywhere," should lead to the consulting of a physician. Reading between the lines, the natural inference is that Dr. Blesh was so educating his clientele that the next step would be to cart the pain off to a surgeon for operation, and after the case he mentions in his own daughter, it is easy to imagine what would happen to that appendix after reaching him. I have three daughters, and I relieve such symptoms, as he describes, in them with "salts" or castor oil. One can not doubt his honesty, after having his daughter operated upon for such trifling symptoms as he describes, but his judgment is open to question. It is all in the training, if we do not try to get away from it.

We will not repeat the symptoms described in his daughter's case. For details see CLINICAL MEDICINE for last January. However, one prominent feature is that every symptom was "slight" and that a positive (?) diagnosis was made in a few hours, operated upon and speedy recovery, etc.

Compare, if you please, with the following. I have many others, but this is a good one and will do for the present.

A. E. B., of Waldron, Kansas, was brought to us in July, 1907. He awoke Sunday morning at 2 a. m. with a *severe* pain in the region of the appendix; nausea and vomiting. His physician was called and within twenty-four hours a diagnosis of appendicitis was made. He asked to have the writer in consultation, Waldron being only nine miles away. The attending physician refused, stating that I was a quack, and applying various choice epithets to me. A physician from another town, one of the busiest men in the place, was called. The previous diagnosis was confirmed, with the

additional information that the patient would die within twenty-four hours if operation were not performed. He, the consultant, gratuitously informed the family that "there is a feller across the way who claims to cure without operation. Anyone can cure 'belly-ache,' but where pus has formed, as it has in this case, no living man can do anything without operation." It was then only a short time until the train passed Waldron going to the slaughter house, and they had to think quick. One son in the family had died four years before, after being operated upon for appendicitis. He lived several months but was never well again, being constantly under treatment. This helped them make up their minds, and the result was he was brought here. This is what was passed up to me:

A young man, twenty-three years old, vomiting incessantly, had not slept since first attacked; anxious expression, abdomen tympanitic—no, bloated tight as a drum, better expresses the condition. Temperature 103.5° F., pulse 135 to 140, small and thready, intense pain and, I suppose, rigidity all over abdomen. Patient could not bear palpation, particularly so on right side. Could not be moved at all without great suffering. Was brought to me at 10 p. m., Tuesday evening, having used 1-2 grain of morphine hypodermically to make moving him possible. About fifteen minutes before reaching here he began suffering again, but we had him resting easy within an hour and asleep in two hours, by using heat, aconitine and hyoscyamine to effect. Within six days he walked a block to be shaved. At this writing he is sound and well, and has good prospects to continue so so far as appendicitis is concerned.

Now how about this case? Was I mistaken in the diagnosis? If so, I have two good men to back me up in it, but they are keeping very quiet about it now, and never mention it unless first spoken to about it. They both have the honor to be very much opposed to my work and methods. I admit that this is one, but not the only one, of my star cases, as I have had them come here in all conditions, ranging from the

above down to what might be called belly-ache. *But*—why are they here? Their physicians advised operation. Does it appear possible that all cases of appendicitis sent for operation are correctly diagnosed? I should think that some were mistaken, but I have yet to hear of a single case who reached the surgeon who did not confirm the judgment of the lower court and operate according to tradition.

I am not opposed to the city physician who is a man, but I am bitterly and unalterably opposed to the great (?) surgeon who sets himself upon a self-constituted throne, wraps himself in a cloak of ultra-ethics, disdains a man who advertises a little bit, and at the same time has practically 75 percent of the "little fellers" they despise driving patients to their killing rooms, as a bunch of cattle is driven to the Armour's. Is this too strong? I confess that it does not smell good to me, but it is facts that no one can deny. If I am lying about my success in this trouble, it will be easy to establish the fact. I am sure that CLINICAL MEDICINE will take pleasure in publishing an exposure of myself, if what I have said are not facts.

In one community sixteen miles south of me there have been five cases of appendicitis in the past two years. Three went away for operation and two of these three came back dead. Two came to me, against the advice and protests of attending physicians, and both are well. Yet these same physicians are still advising patients to keep away from me. Are all the people fools? It looks as though many of them are. In another town in Kansas I have had two patients; one of them dates as far back as 1898, and both are well pleased, and yet this town of about 2000 population furnishes an average of probably one case a month for operation.

I have been at my present location for about thirteen years. I am a lawabiding citizen and have a fair reputation for veracity. I feel and know that I have the respect of the laity. I also feel and know that I have lost the outward respect of the physicians about here, that is, most of them. For

fifteen years I was strictly ethical, but I could not stand for everything demanded by the modern code. I guess I bolted and am a "quack." Anyway, they have called me that, and other things.

In conclusion let me say that if refusing to operate, or if refusing to consent to an operation upon a patron and friend, and perhaps a neighbor upon unnecessary or inoperable cases, if putting these facts before the public in papers, and paying for it, when my professional brethren refused to help me do it ethically, if this be quackery, then, God being my helper, I will be a quack to my death, and when I am done, will have the satisfaction of knowing that I have at least saved some lives and prevented much unnecessary suffering.

B. W. SAFFORD.

Manchester, Okla.

[We disapprove of advertising practice and we think every doctor who embarks in it makes a serious mistake; but it is our way of doing things to give everyone who tries to be fair and square a hearing in these columns. Dr. Safford has some excellent ideas which are presented for what they are worth.—F.D.]

## THE STEAM AUTOMOBILE

I have been a user of steam automobiles for six years and at first thought I would have nothing else. Steam has its disadvantages in getting under way, but, oh! Jupiter, it certainly is *the* power. Well, I have watched all sorts of gas machines for three years past and not a one that I tried suited me, but the gas machine is the doctor's machine on account of getting away quick. Now, that isn't all. You want to get there and back, and you want plenty of power for hills and mudholes. You want simplicity above all things, and get-at-ability in case of having to get at any part.

"Well, that is all right," you say, "but where do you get all these things?"

I answer: Buy a Maxwell tourabout, price \$825. It will meet all requirements, is strong and well made of best material, all

the working parts under the bonnet and easily accessible, plenty of power, and as they say in their advertisement, "perfectly simple and simply perfect," or as near as you can come to it in an auto for the doctor's use.

Now as to air and water cooling. Give me water, and if you use ordinary common sense you won't have any leaky radiators. My machine has run all winter, stood in front of my city office from 3 to 6:30 every afternoon when everything was frozen tight, even to the tubes leading from my acetylene generator to lamps, but my radiator never froze up. I used 30 percent of denatured alcohol in my first filling of the radiator, as it got cold, and about once a week I would have to put in a quart or so to make up for evaporation, using half alcohol and half water to keep my tank full, and there has been no trouble with freezing. A 40-percent alcohol and water mixture won't freeze at 10 degrees below zero, while the alcohol does not in any way injure the rubber hose, that carries the water to water-jackets and back. The Maxwell thermosyphon does away with circulating pump and troubles and annoyances caused by that. For little trouble, reliability, getting out quick, ease in learning to handle, and get-there-and-back qualities I wouldn't trade my little Maxwell for any other doctor's car of any other make in town.

C. L. THUDICHUM.

Baltimore, Md.

#### SOME HELPFUL AUTOMOBILE "POINTS"

In your March issue you ask for a summary of points relative to an ideal automobile. This whole question resolves itself into this: where will the physician use his machine? Any old car will pull over good streets and city pavements, but the country road--there's the rub. Here is where we find the wagon and buggywheel rut, the frozen rough road, deep snow, or if in a mountainous, hilly or sandy country, the roads will be accordingly bad. The majority of our profession make country drives,

and the ideal automobile outlined below is for them.

1. The ideal automobile should have an owner who is mechanically inclined.

2. It should not be an electric or steam vehicle for business purposes.

3. It should be purchased from a firm or agency as near by as possible and courteous in the treatment of its patrons.

4. A reliable machine need not cost more than one thousand dollars.

5. Every machine will give trouble. Most trouble however comes from inexperience. Read up!

6. Plenty of power is the most important question for bad roads. The relation of horsepower to weight should be about 1 to 50 or 60.

7. Next in importance is tire trouble. *Very few* escape the puncture and blow-outs of pneumatics. *No one* escapes the expense of replacement, which is the greatest item on an automobile. The rubber trust has the market under control. Therefore use solid tires 1 1-2 to 2 inches in thickness.

8. Hand in hand with solid tires go high wheels. Those having a diameter of 40 inches, with a standard tread of 56 inches, give best clearance, take the ruts nicely and are easy on the machine as a whole. The longer the wheel-base, the better the riding.

9. The three prevalent forms of transmission give good service. The planetary makes noise, but is fool-proof. The double-friction drive is better than the single. The sliding-gear transmission is excellent.

10. More important is the final drive. For the highwheeler double-chain drive with the differential on the countershaft is the best.

11. The greater the number of cylinders up to six, the greater the efficiency, but necessarily six cylinders require six times more care than one. It is impossible however to get enough power and smooth running from a one-cylinder machine. Two cylinders are a happy medium.

12. An air-cooled motor is a success. Such a motor, however, will overheat in summer if run on the low gear too long over bad roads. So will a water-cooled machine,

and don't you forget it! Air-coolers have a shorter lease of life on account of constant high temperature of explosions but will average about three years' service. They save a great deal of weight, extra parts to get out of order, besides time and expense. They are best suited to the physician who has many winter months to contend with and few hot summer days. The water-cooler is best for the physician in the warmer southern states.

13. Last but not least, get a machine the springs, frame and axles of which can be repaired by any blacksmith.

For the benefit of would-be purchasers I give below the names and addresses of four firms making automobiles which meet the above requirements:

Air-cooled: Bendix Auto Company, Cragin Station, Chicago. International Harvester Company, Auto buggy, Chicago. Hatfield Buggabout Company, Miamisburg, Ohio. Water-cooled: Reliable Dayton Company, Chicago.

E. OLANDER.

St. Paul, Minn.

[We think we now have given the motorist his "innings." Therefore the "experience meeting" will be called closed—for the present anyhow. I think many of our readers have enjoyed this discussion, but unfortunately many others, being denied the pleasure of owning and operating an "auto" find this talk of the craft "all Greek." We have a number of excellent papers on this topic still on hand which we should like to

publish, but space is lacking, and *nous retournons a nous moutons*—therapeutics.—Ed.]

### CORRECTION

Dr. W. Taylor Edmunds of Ferguson, S. C., calls attention to a curious error



Dr. Herrick in his Automobile

which crept into his little article appearing on page 534 of the April number of *CLINICAL MEDICINE*. Instead of "Press the toothpick downward and upward" it should have read "With the toothpick press downward and outward." Also by mistake his name was signed A. Taylor Edmunds instead of W. Taylor Edmunds, the latter being correct.

### AUTOS AND ALKALOIDS

I send you under separate cover a picture of myself and automobile. I have used an auto for three summers and find it a great help. I keep one good horse for winter work. The auto is more expensive to keep up than a horse, but my family get a great deal of pleasure out of the machine.

I have been gradually working into the alkaloids, and find them right. I have spent fifteen years of my life behind the prescription case of some of the best drugstores in Michigan, and when I started to practise I wrote a great many prescriptions, not knowing how to get at the bedside dispensing. I do not write one prescription where I did twenty-five a year ago. I am doing more and better business and getting more money, and shall continue dispensing as much as possible.

A. W. HERRICK.

Bay City, Mich.

[Dr. Herrick's experience is not an exceptional one. The "reformed" drugclerk turned doctor is one of the first men to see the advantages, both to himself and his patients, of carrying and dispensing his own remedies.—ED.]

#### A FRIEND OF THE AUTO

I notice in the March CLINIC that the automobile experience meeting is declared open. I mean to speak right out in this meeting for I have been a sinner in times past. I even invented new words with which to cuss the makers of these "trouble wagons." I was a bad one, but a great light has come to me, and now I sit in the "Amen Corner" and try to look with a benignant eye upon other sinners.

Two years ago I bought a second-hand machine on which to learn. Then the trouble began, for I was totally ignorant of gas-engine construction, but I had an abiding faith that I could learn, and I did learn. I then exchanged the old machine for a Holsman No. 11. That machine is my personal friend and any man that says anything against it, touches a tender spot. I fail to understand why Dr. Richardson calls it nondescript unless it is the fact that it will

go where the others cannot think of going. Dr. Lowe says that the machine does not negotiate sand, hills or mud to advantage, that the engine is liable to overheat and that the Holsman people are unsatisfactory to deal with. Now, I have had some experiences in this line and I wish to relate them.

My experience with the Holsman people has been just as pleasant as that with other



Dr. Bomberger and his Faithful Holsman

business firms. Last September I sent a patient to Madison Lake to recuperate. He desired me to visit with him for a few days. So, one bright Sunday morning I loaded up the family and started for a little outing. Madison Lake is thirty miles from Mapleton. It rained on Sunday night, was cloudy on Monday and it rained again on Monday night. I had made appointments with patients at my office for Tuesday afternoon. I started home on Tuesday morning. The sand, sticks and other debris washed to the foot of the hills by the night's storm were at some places twelve inches deep, while near Mapleton the mud was so sticky that the wheels filled up solid. Of course the trip was made on the low gear, but the machine went home in a little less than three hours and the engine stopped as soon as the

current was switched off, which proves that the engine was not overheated.

Last fall I ran my machine into Mankato several times. It was a curiosity there, at that time. There are long, steep hills out of Mankato. The owner of a 1200-dollar car asked me if I could climb a certain hill. I told him that I could go up that hill on the high gear, and as he looked incredulous I took him up. He then said, "Well, my car won't do that."

A few months ago a man came to my office to consult me about his wife. I suspected that I had to deal with a placenta prævia, and so informed him. I told him to call me upon the first intimation of pain. That same evening, while I was sitting in my office, he called up and said, "Come out." The distance was nine miles. I walked four blocks to where I kept the machine, started the engine, backed out of the barn and made the nine miles in less than thirty minutes. When I arrived the woman had already fainted from the loss of blood. Of course the machine saved the woman's life. I rode about as fast as I cared to. To those who are still in doubt I wish to say that my engine does not overheat, that it has ample power to go anywhere, and is also speedy enough. I would advise all those who have recharging facilities to put storage batteries into their machines.

F. J. BOMBERGER.

Mapleton, Minn.

### A FIGHT FOR THE TRUTH

Many years ago it was recorded by a good doctor, known as "the beloved physician," that certain advocates of a new doctrine were hailed before the council in order that they might be condemned to death, when there stood up one learned in the law, held in reputation among all the people, who said: "Ye men of Israel, take heed to yourselves what ye intend to do as touching these men. . . . I say unto you, refrain from these men, and let them alone; for if this counsel or this work be of men, it will come to naught; but if it be of God, ye cannot overthrow it; lest haply ye be found even

to fight against God." The man that said this was Gamaliel, the great teacher, at whose feet sat Saul of Tarsus, who became the greatest preacher of all the ages.

Is it too much to hope that some man, fair-minded and broad enough to be just, may yet arise in "the council" and admonish that body to be careful about what they intend to do? "Truth is mighty and will prevail." Many of us out in the field look to you to continue the fight for the advanced doctrine of dependable therapeutics. We recognize you as leaders in a great cause and we will stand by you through the fight. Do not be overawed by any man or set of men in your contention for the truth.

A. S. TODD.

Manning, S. C.

[Letters like these are an unspeakable source of strength and encouragement to us. We have received many of them during the last few months and an unusual number during the last few weeks. All that cunning and ingenuity could devise to harm us, to undermine our strength with the profession, has been tried, but our friends see and understand that the fight that is being made upon us is something more than an assault upon "Abbott"; it is an attack upon the independent doctor, the doctor who dispenses his own remedies, who insists upon thinking his own thoughts and practising his profession in the way that he thinks best for his patients, rather than as the "rulers of the ring" want him to.

Apparently the orders have gone out to kill us—to eliminate us as a "disturbing" element in the "get together" program, an element cutting too deeply into the profits and emoluments of those whose future lies in the perpetuation of the uncertainties of galenic medication—to crush us under the wheels of their Juggernaut while they tie you to its tail. But it is not so easily done! We have thousands of friends like Dr. Todd, who bid us godspeed in our work "for the advanced doctrine of dependable therapeutics" and who will stand with us through thick and thin. We stand firmly upon the rock of their friendship. As one doctor

writes us, "I'm with you till H. F. O." not very polite but expressive, and coming from a warm heart.

Many urge us to "come back"—to answer these assaults; some, most friendly and impatient of our silence, demand us to do so and criticize our delay. We shall answer, dear friends, we shall! Be patient, just wait a bit, and trust us to fire our broadside at the time and in a way that shall pierce the armor-belt of this pirate ship, sailing under false colors and preying upon independent medical thought and endeavor, till it looks like a kitchen colander, and as such, and lopsided, rusty and no longer a shield, it is relegated to the scrap-heap where it belongs. Not only is the truth being distorted to suit the purposes of our foes but lies are being calumniously circulated which are as black as the hearts that conceive them.

As we have said many a time before, we want but the truth. And the truth, as we see it, we shall fight for. Above every other desire in our hearts is the aspiration to be of service *to you*. After all, "the biggest clubs are found under the best apple trees." The very fact that we are helping the doctors of the country to greater success, and that they appreciate that fact, is making us more enemies than anything else. But—we believe that you will stand with us and help us—now.—ED.]

#### GOOD THINGS FROM THE "PHLEBOTOMIST"

*The Bloodless Phlebotomist* is confessedly a "trade journal," put out by the people who make antiphlogistine; but it is bright, wise and helpful, and those are reasons enough for its existence, whether it sells "Denver mud" or not—though we certainly hope it does!

The February number is particularly good. Perhaps we are prejudiced more than usual in favor of this number because it contains an excellent article by our friend, Dr. J. M. French, on "How to Treat a Pneumonia Patient"—an abstract of the original article on that subject in *The Critic and Guide*, outlining the alkaloidal methods

so familiar to our readers. But the articles are all good. One point particularly interested us, raised by Dr. Lubbert in his paper on "Treatment by Hyperemia." Discussing the action of antiphlogistine he says:

How intense the effect of the dressing may become, I have had occasion to observe in a patient suffering from Bright's disease, whose legs and feet were highly edematous, in fact, had the appearance of a shapeless mass. I had the patient put to bed and applied antiphlogistine around the right lower extremity, the left being left free and placed in a raised position. After twenty-four hours the leg under treatment was quite normal, the knuckles were plainly demarcated, at the dorsal surface of the foot the tendons became visible and there was no trace of edema upon pressure. The left extremity, which had not been treated, did not present any change whatever, being swollen to precisely the same extent as it had been twenty-four hours before. In regard to the skin which had been enveloped in the antiphlogistine: anyone who did not know of the procedure applied might have thought that the leg had been freshly washed with soap and rubbed with oil, to judge by its whiteness and suppleness. With the aid of a magnifying glass it could be observed that the glandular lumina were widely gaping, a little droplet oozing here and there out of the sweat glands, while from the sebaceous glands a dilute secretion could be expressed.

We confess that we have at times been skeptical concerning this alleged exosmotic action from the application of the clay pastes; but it seems pretty well established, in this case at least.

#### DR. JUETTNER'S BOOK

While many of the students in our post-graduate course have purchased Dr. Juettner's book, "Modern Physio-Therapy," we wish that all of them might get it—not only they, but every reader of *CLINICAL MEDICINE*, the book is so filled with helpful therapeutic matter. While our special field is medicinal therapeutics, there are constantly opening up new "physiologic" or "physical" methods of treatment, some of them evanescent to be sure, but many of great value to the physician. You, Doctor, should be familiar with these things—should use them wherever they give reasonable promise of benefit—for our mission is to heal.

Dr. Juettner's book covers this ground. Space in it is devoted to personal hygiene,



dietetics, the effects of heat and cold, including thermotherapy and hydrotherapy, mechanotherapy, light-therapy, electrotherapy, the use of the x-ray, etc. It covers an immense field and does it in a remarkable manner.

The knowledge gleaned from this book, added to a careful study of alkaloidal medication, will fit a man to do almost any kind of therapeutic work with greater success, and to add to his influence and income thereby.

The Clinic Publishing Company will supply the book, if desired, or it may be purchased from the author direct. The price is \$5.00. It's a big book and a most valuable one.

#### IF WE BUT KNEW

There's many a tale of the tongue that's untold,  
That trembles to turn tears away;  
There's many a song of the sad soul unsung,  
That sighs to see sorrow still stay;  
There's many a hope of the heart that's unheard,  
That harks to hear heavenly strains;  
There's many a wish of the will unexpressed,  
That wonders why worry remains.

There's many a mood of the mind, that is masked,  
That might move the millions, in voice;  
There's many an agency acting alone,  
At which all the angels rejoice;  
There's many a smile that seldom is seen,  
But sometime and somewhere shall show;  
There's many a love of the life, not unloosed,  
That's learned long lessons below.

The tongue and the soul, and the heart and the will,  
May be, each and all, out of tune;  
The tale and the song and the hope and the wish,  
Will likewise forgotten be, soon;  
The act is soon ended, the mood is soon gone,  
The smile fades quickly away;  
But the lesson of life is lasting and long,  
Only love is the one sure to stay.

HOMER CLARK BENNETT.

Lima, O.

#### WHOOPIING-COUGH—A NOVEL TREATMENT

Dr. A. R. Hallman, of Mexico, writes us of two children sick with whooping-cough, who were apparently cured by the use of ice-cream. One child had been affected two months, the other one month; so that there is a possibility that the disease had run out, and that the cough was simply one

of habit, or there may still have been an infection of the throat, or simply the results of the attack remaining. The ice-cream may then have acted on the congested or relaxed tissues, restoring them to a healthy condition, or it may have acted directly against the microorganisms inhabiting the affected tract. Whichever it was, the hint is well worth following out; and we should be very glad if any of our readers who feel inclined would try this very pleasant and acceptable remedy in all cases of whooping-cough, and let us know the results.

#### OF COURSE



#### Up to Date.

"Is your family physician of the new or old school?"

"The newest, I believe."

"What is his distinguishing peculiarity?"

"Small doses and big fees."

The accompanying cartoon comes from *The Daily News* of Chicago. We are glad to see that the lay press is beginning to appreciate the beauties of the "arms of precision." Of course it's the doctor that gives the small doses and the dosimetric granules who gets the big fees!

#### FROM A FLOPIDA DOCTOR'S WIFE

On looking over your journal for March my attention was particularly called to your

article on "The Northern Winter." In imagination again I could see the earth covered with its mantle of snow and feel the keen air from the north upon emerging from the home fireside. But I was startled by your assertion that "more than one hundred of the citizens of Chicago are dying each week of pneumonia." That is a serious situation.

It is probable that many persons who have passed the meridian of life would be exceedingly benefited by spending the winter months in a southern latitude where "the flowers are blooming in winter" and one can spend nine-tenths of the time in the open air, and you rightly infer that the people do not know where to go to live well and cheaply.

But I must reply to your reference to the "flowery Atlantic Coast" with its great hotels and "their altitudinous rates," myself having lived in this region for the most part for very nearly forty years, both winter and summer. It is true that there are some of the finest hotels in the world along the East Coast, and with corresponding prices; there are also scores of beautiful towns and villages where one can live as economically and well as one could desire, besides having for neighbors people who have come from Chicago and other points in the Middle West and in the New England States. This is a very desirable portion of the state for winter visitors, on the above account. Do not understand me as depreciating the Gulf States; the climate is nice everywhere here, and many conditions are favorable for health in all sections of Florida. But for a real "homey feeling" as among old friends and kindly neighbors, I can recommend the East Coast from an actual experience of two-score years.

There is one thing that must not be overlooked in coming south, and that is the quality of water. This one item has more to do with the healthfulness of a place than climatic conditions alone. My husband, who is a doctor and one of the most enthusiastic members of Abbott's CLINICAL MEDICINE "family," has found this to be the case in a practice of many years in the state.

If there are any of the readers of the journal who would like to come down next winter, and who would be glad of the information that an old settler from Illinois can give, I will gladly write and tell them what I know regarding conditions here, and what our experience has taught us, and how the country has benefited us both.

In writing to the great railways send to the East Coast Railroad, Jacksonville, Fla., for their circular, and address with stamp the undersigned.

MRS. E. A. HILL.

Orange City, Fla.

### TENIACIDES FOR INFANTS

An interesting question as to "teniacides for infants" is raised in the December number of THE CLINIC, page 1424. In a practice of forty years I have never seen an infant afflicted with a tapeworm. I have often asked myself the question, what dose of a teniacide should I give if an infant case came to me. My answer has been, a much smaller dose than for an adult. My youngest case was that of a boy eleven years of age, rather small for that age; I gave him, at 7 a. m. (allowing no supper the evening before), half the adult dose, he still fasting. At 10 a. m. his father brought a worm 24 feet long to my office and at noon the boy himself presented himself overjoyed at being rid of the parasite. He professed himself feeling all right in every way. As for myself I should hesitate long before giving to a child two to five years old a full adult dose of any remedy for tapeworm. It is better to be safe than heroic.

THOS. B. TURNBAUGH.

Bloomfield, Mo.

[While a little belated, the question raised by Dr. Turnbaugh is an interesting one. What is the youngest patient you have known to be afflicted with tapeworm? How do you treat children when the host of one of these troublesome parasites? We shall be very glad to hear from other readers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE on this point.—ED.]



## CLINICAL · MEDICINE POST-GRADUATE SCHOOL & THERAPEUTICS

George F. Butler, M. D., Director  
Thomas J. Mays, M. D.  
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.  
William F. Waugh, A. M., M.  
Alfred S. Burdick, A. B., M

### PART I.—LESSON FIVE

#### INDICATIONS FOR REMEDIES

##### THE FACE, EYES AND TONGUE

The Expression of the Face often-times tells us of inside life and it also tells us of the remedies that will remove wrong and restore health. It will often tell us, first, the condition of the brain; second, the condition of the sympathetic nervous system and the associated spinal cord; third, the condition of the circulation of the blood; fourth, as to whether there is any local disease; fifth, whether the patient is suffering pain; and, sixth, the resistance of the patient to disease.

We may by a close examination of the facial expression determine fairly well as to the circulation (determination of blood, congestion, inflammation), and we may also learn something of the condition of the brain and its functional activity. If the eyes are bright, pupils contracted, the face flushed, and there is a moderate contraction of the facial muscles, it is a pretty sure indication that there is *excitation of the brain*, especially if the patient is restless and uneasy. These indications lead us at once to think of remedies which will relieve vascular excitement, not only internal remedies, but the old-fashioned derivatives, counterirritation, etc.

*Congestion* is marked usually by dull eyes, dilated and immobile pupils, expressionless face, and the patient is dull and inclined to sleep, with a tendency to coma. Here our vascular remedies are to be considered, as well as the indirect means, such as counter-irritation, dry or wet cupping, and stimulant cathartics. If the eyes are full and protruding and there is puffiness of the face, with prominent veins (other symptoms of an *apoplectic condition*), stimulant hydragog cathartics are indicated, as well as the indirect remedies, such as cupping, counter-irritation, etc., together with such direct remedial drugs as may be indicated. Where there is *active inflammation* there is greater contraction of the muscles, especially those of the orbits and the frontal region, the face is deeply flushed, expression of the eyes is sharper, and the pupils are contracted. In this condition remedies, such as increase the action of the skin, kidneys and the bowels, are urgently needed, together with cardiac sedatives, such as aconitine, veratrine and gelsemin. Counterirritation to remote parts, to bring the blood away from the inflamed areas, is also indicated.

When *effusion* has taken place, the eyes are very dull, the muscles of the lower part

of the face are relaxed, and the orbicularis and frontal muscles are contracted. The symptomatic indications here would be counterirritation over the spine, like cupping, and vigorous stimulant hydragog cathartics. Mild doses of aconitine or atropine may prove useful.

**Facial Aids to Diagnosis.**—The appearance of the face may also lead up toward diagnosing some local disease, as for instance: . Disease of the *respiratory* apparatus often will be shown by the expression of the nose and accessory muscles. One who is familiar with the clinical aspect of pneumonia, pleurisy, bronchitis, etc., must have recognized the pink expression of the nose and the contraction of the *alæ nasi*.

Diseases of the *abdominal* and *pelvic viscera* often are known by certain expressions of the mouth. We have all recognized the white lines around the mouth, indicating the presence of *intestinal parasites*, and our minds are at once directed to the proper remedies. The melancholic, or despondent, expression, the depression of the angles of the mouth, and slight incurving of the lower lip, all point to mental depression, much of which may be due to *intestinal toxemia*, at least our minds are at once directed to intestinal antiseptics, cathartics, and drugs which will give normal stimulation to the circulation and restore functional activity. *Pains in the abdomen*, *pelvis* or lower extremities often finds characteristic expression in the mouth. Contraction of the orbicularis oris is often found in some diseases of the *reproductive organs*, especially of the female. There is often distinct retraction from the other muscles of the face, and the entire tissues seem thinned in many chronic diseases.

The relaxed, drooping mouth, falling jaw, trembling muscles, all show us the need of increased care to conserve vitality and of the employment of restorative remedies and eliminants. Increased color of the cheeks has been noticed as a symptom of thoracic disease for a great many years. The habitual recurring flush of one or both cheeks has reference, almost invariably, to an irritable or *diseased lung*. If we notice

this circumscribed flushing of the cheeks, our attention is at once attracted to the respiratory apparatus. Whatever the respiratory disease may be, we know that this symptom is always associated with a wrong of the *sympathetic nervous system*, especially in its relation to circulation and nutrition. Sometimes there is quite as marked pallor, and the evidence would be a want of innervation. While the bright color of the cheek, where it has reference to disease of the respiratory organs, tells us of an irritation and activity in circulation, deep color indicates the impairment of the circulation and of the life. The livid, purplish color in some cases of *angina pectoris* may be taken as a type. We have it in much less degree in *thoracic aneurism*, in *apoplexy of the lungs*, and in some very severe cases of *asthma* with congestion. The dark redness is always evidence of a difficult and imperfect circulation.

The color of the conjunctiva and sclerotica will sometimes give us information in regard to the circulation of the brain. If we find an injected conjunctiva (not the result of local disease) we conclude that the *cerebral circulation* is similarly affected. If the color is bright and the surface looks smooth and moist we have evidence of the determination of the blood. If the color is deep and the surface looks dull and dingy, or dry, and pinched, it represents hyperemia, with obstruction to the return of blood—the *apopleptic* condition.

**In Superficial Disease.**—If the color is a bright, healthy red, we know at once that the inflammation is simple and is not very likely to work a very great wrong to the part or to the body in general. It indicates irritation, and the determination of blood and of activity of circulation.

The second part of the wrong of circulation—*stasis*—is in but small proportion. This condition calls for general arterial sedatives, local sedatives, increased secretion and elimination. When the color is deep-red and dull, we are confident that there is marked impairment of life and arrest of circulation. The fact that there is too much blood in the part is evident,

that the capillaries are enfeebled and the circulation in them is sluggish or arrested, that change has commenced in the stagnant blood, and that the life of the part will be destroyed unless these wrongs are corrected. It says distinctly, strengthen the general circulation, while you lessen the frequency of the press and conserve and sustain the life of the blood by rest and food. Local application is to be made of stimulants—we want to strengthen the life of the part. If we select an internal remedy that is to influence the part from the blood, this remedy must be stimulant or tonic in its character.

*The tongue* may tell us of the condition of the digestive apparatus, the condition of the blood, the condition of the nervous system, and of the functions of nutrition and excretion.

**Tongue Indications.**—We all recognize that the full, broad, thick tongue is usually an evidence of atony of the digestive tract, especially of the mucous membranes. The pinched, shrunken tongue indicates a want of functional activity in the digestive apparatus. The fissured tongue points to chronic disease, usually, possibly a lesion of the kidneys, inflammatory in character. The coatings of the tongue all help us in making a diagnosis, and lead us toward the proper remedies to employ. Many of us have learned by experience that whenever we find a broad, pallid tongue—marked want of color in the tongue itself—such patients are always benefited by alkalis. Here there is a lack of the alkaline element in the body, and usually we shall find that the degree of urinary acidity is below 30 or above 45, showing a retention of acid waste-products in the body. Free elimination by the bowels and full doses of some alkali, such as sodium bicarbonate, will almost always correct these conditions. On the other hand, a deep-red, contracted, dry tongue is fairly good evidence of the want of an acid, as well as of that condition of the blood known as the “typhoid” condition. Some acid which will correct the undue alkalinity of the body-fluids will often help these patients.

**Lesions of Innervation** may be due to a change in the condition or structure of the nerve-centers or to some lesion external to these. The more common lesions are of the circulation, and we have them from the two opposite conditions: an excited circulation (too much blood in a part) or an enfeebled circulation (too little blood in a part).

If we have hyperemia, remedies which lessen excitation would be indicated, other things being equal. If it is anemia we should employ such agents as stimulate and give a more vigorous circulation. In the first cases the treatment may be temporarily depressive; in the second it is always restorative and tonic.

We bring out these points rather briefly to show the indication for certain remedies. For after all, many of our diseases are treated, and must be treated, symptomatically. It is not always possible to remove the cause of the disease. *The condition of the patient, the individual himself, must be treated, and not the disease-label.*

We wish to emphasize the importance of closer observation in the treatment of sick people. Laboratory methods of diagnosis are very essential, but almost equally as important, if not fully as much so, is the close observation of little things, such as the expression of the face; the position in the bed; the carriage or action of the patient when he comes into the office; the character of the pulse; the color of the skin; the appearance of the stool; all of which things will help immensely in selecting the proper mode of treatment. Every physician recognizes that when stools are colorless, grayish or clay-colored, it is a pretty good indication for some remedy, such as calomel, which will stimulate the flow of bile and increase the functional activity of the liver. We should not rely upon instruments altogether. The finger can be so carefully trained that it will notice the slightest variation in the surface of the pulse wave, as well as in its length. Feeling the pulse gives us a knowledge of the lesion and character of the circulation. Nearly

every lesion of the circulation can be distinctly felt to a cultivated touch.

### ALKALOIDAL THERAPEUTICS

**Palatability of the Remedy.**—The physician who does not study palatability in the prescription of drugs has a good deal to learn. It certainly cannot be a matter of indifference that a child suffering with fever should have to be fought in order to put nauseous medicine down his throat. There is no question that the popularity among the laity of the homeopathist is very largely dependent upon the ease with which his little pellets are administered. Most active principles are bitter, but the little granules are exceedingly easy to swallow, even for a baby; and when dissolved in water the slight bitterness is not an objection. Even this may be disguised by the addition of a few granules of saccharin or of licorice, when the child is better. The patient who has fever prefers no taste at all above every flavor that was ever devised by the apothecary; and it is very rare indeed to have any patient, child or adult object to the slight bitterness of these granules when dissolved in water.

There is an enormous advantage accruing from this, and whatever there is in the question of palatability, you might just as well have it yourself as to leave it to the Christian scientists and the homeopathists. Palatability also has a great deal to do with the patient retaining the medicine on the stomach. Remedies that are nauseous, excite vomiting and will not remain in the stomach will not do much good. In fact, it is the unnecessary part of the medicine, the dirt, which generally causes the patient's disgust. It is therefore the unnecessary part of medicine which makes it unpalatable and objectionable.

In the incessant vomiting even of sea-sickness or cholera morbus it is exceedingly rare for the alkaloidal granules, taken as granules or in a little water, to be rejected by the stomach; and the fact that they are so quickly absorbed enables us to obtain their effect even if only two or three minutes elapse before vomiting occurs.

**No Guesswork.**—Another of the numerous advantages of the alkaloids that will be appreciated by physicians is, that by means of these articles scales, weights and measures are rendered unnecessary. No guesswork is admissible. Each granule contains exactly the amount specified, and the exact dose you require may be administered in a moment. One practical point here occurs to me—it is better to use granules than tablets. If the tablets are compressed very hard, they are liable to pass through the bowels undissolved, and their effect is lost; but if they are not compressed very hard, they are prone to chip off, so that the exactness of dosage is impaired. This is not the case with the granules, whose shape prevents this attrition. There is no loss from leakage; there is no loosening of the cork, to allow liquids to flow out and destroy the case or the contents of the satchel, besides being themselves lost.

Moreover the granules are not subject to deterioration. It has been ascertained that when the pure active principles are put up in granules with pure sugar of milk they can remain unchanged for an unlimited period. We know of the existence of granules which were made eighteen years ago; some of these have crossed the equator twice and have been through every possible vicissitude of climate which this globe presents, and no appreciable change has taken place; these granules are as perfect as the day they were made. So long as moisture is kept from them this will be the case.

**Strictly Scientific.**—Finally—I have kept the most important of all my points for the last. The use of the active principles is based upon a strictly scientific foundation. Our knowledge as to the physiologic action of drugs has been derived mainly from physiologic experiments. When the great men of our profession, Brunton, Ringer, Waning, Fraser, Murrell, Phillips in England, the elder Wood and Hare in America, and numerous others, commenced to make observations on vegetable drugs, for the purpose of exactly fixing their status, they were compelled to resort to the active

principles in order to make their work of any value. Of what possible use was it to give observations upon tinctures or extracts when no two tinctures or extracts of that plant were of the same strength, either as to quality or quantity? They were therefore compelled to take up active principles. Consequently, in treating of belladonna, you will find that it is atropine of which they spoke; and upon atropine, morphine, quinine, strychnine and the other active principles our entire scientific knowledge of the action of drugs depends.

Nevertheless it is a curious comment on the habits of the time and the strength of the conservatism (or rutiness) of the medical profession, that after ascertaining the exact action of these active principles on the human economy, they attempt to deduce therefrom the therapeutic application of the crude drugs from which they come. In other words, after extracting and fully testing the active principles, they put these clean agents back into the dirty mess from which they had taken them and offered it to their patients.

Just why did they not use the active principles? Habit, conservatism, the ruts in which many of the profession move.

It happens from this, however, that as to the active principles we have the most precise data obtainable as to their action on the human economy; and this enables us to apply these agents with a precision absolutely impossible with the older preparations.

This results, therefore, in this—and I will ask your especial attention to this point: the therapeutics of the active principles is not based upon the therapeutics of the crude drugs from which they came. There may be a certain similarity in the two; in fact there may be a very close similarity, but they are not identical. We do not use quinine because somebody used Peruvian bark a hundred years ago, but because it is quinine; and our ideas as to the application of quinine are derived from the quinine itself and not from Peruvian bark. We use strychnine for itself. We use each of the active principles for itself, and we ought to get out of

the habit of looking upon them simply as forms of the crude drug.

**Dissociate Crude Drugs From Their Alkaloids.**—If we appreciate these facts we shall get rid of the greatest objection which occurs to those who are accustomed to the old methods and ways, and hesitate to take up the new. They cannot dissociate emetine from ipecac, for instance; nevertheless the uses of emetine are simply impossible to us if we employ ipecacuanha. This latter is notoriously one of the most uncertain drugs in the materia medica and the most subject to decomposition, so much so, in fact, that we seriously question if there is a single fluid extract of ipecac in existence which is worth anything whatever at the end of a year.

**Ipecac and Emetine.**—Ipecacuanha contains two alkaloids; one is known as cephaeline; it is an exceedingly active emetic. The other is known as emetine; it is scarcely emetic at all, unless when taken in very large doses and well diluted; but it has a very remarkable action upon the liver and upon all the secretions of the digestive system, stimulating them and especially tending to produce a healthy secretion to take the place of the vitiated secretion in cases of disease of the alimentary system. Emetine is one of the most harmless and effective sedatives in existence. For instance, take a patient who is on the verge of delirium tremens, crazy for liquor; give him a full dose of pure emetine, all that he can take without nausea. He will go to sleep in a few minutes, sleep eight hours, and awake free from the desire for liquor, ready to eat and relish a good breakfast and go out to his business. I know of no other drug which can take its place. It is absolutely impossible to secure any such results from ipecacuanha in any dose. If you give enough to act on the liver it is certain to be vomited.

**Summary.**—I would therefore say, in summing up, that the use of the active principles teaches precision in the doctor. Knowing exactly what his drugs will do, he becomes accustomed to close observation of his patient in order to ascertain exactly

the condition which is present, that he may apply exactly the proper medicament to restore health. This induces an alteration in his practice in another respect: Diagnosis becomes even more important than it was before; but it is a different diagnosis from that ordinarily employed. Ascertaining the name of the disease is not so important as is ascertaining exactly the departure from health. The doctor learns to recognize certain morbid conditions as such, and he knows also exactly what to do to remove those conditions and restore the physiologic equilibrium which we call health. Nevertheless, if he were called upon to give an exact name to the disease present, he might find himself unable to do so. Do not think from this that I am endeavoring to encourage a loose habit as to diagnosis. It is of the utmost importance; but there are two diagnoses to be considered; first is the name-diagnosis, and second is the diagnosis of the conditions. The more the physician studies at the bedside the greater will be the value he puts upon the latter. We hope that he will not undervalue the former thereby.

I trust that I have given you in these points something to think about. You may not agree with me. I hope you won't—in all respects; for it is not our desire to secure disciples but rather to arouse thought in the minds of our friends. What you think for yourself, the conclusions you come to, are of much more value to you than any you may derive from me or from any other human being. The whole system that is built upon the use of the active principles tends to the individualization of the doctor, to the development of his own personal qualities as a diagnostician, and a therapist, as it does to the individualization of the case. You, and not your master, are treating this particular patient. You learn to look upon him as such, to look upon your duty as that of ascertaining the condition of that particular patient at that particular time and place, and to apply such remedies as will restore that particular patient to the condition of health.

It is thus the most direct of all systems, and it furthers directness of aim as well as

accuracy in the physician. Confidence as to the action of remedies gives the physician confidence in other things, and this in turn induces confidence on the part of the patient.

The experience of every physician who has adopted these remedies and methods dependent upon them is, that their standing with their clientele soon improves, and they are depended upon more absolutely than they were ever before. And the reason is an obvious one—they deserve to be depended upon more than they did before. They know what they are about, they know what they are doing, they know what is going to happen when they give a dose of medicine, and the ulterior effects of this are simply tremendous.

#### PHYSIOTHERAPY

##### HYDROTHERAPY (CONCLUDED)

We have seen on a previous occasion that hydrotherapy is only one of the subdivisions of the general subject of thermotherapy, meaning by the latter all methods of treatment that depend for their therapeutic action and clinical uses on the physiological effects produced by different degrees of temperature, i. e., by the action of variable degrees of heat and cold. We have discussed the salient features of the whole subject under the head of hydrotherapy, because the latter is the classical type of all these methods, belonging under the great general head.

What carrier of high or low temperature we use, is of secondary importance. We may employ water, air, vapor or any other agent capable of carrying heat or cold. The principal thing is to understand the theory of these applications in the light of their physiological action. Hydrotherapy illustrates the theory of these applications better than any other subdivision of the general subject, more especially the physiological effects of the different so-called "reactive" applications.

We have considered the general features of these "reactive" applications as exemplified by the (reactive) immersion, douche or pack. It now behooves us to discuss the "non-reactive" applications.



A non-reactive application is a continuous application of heat or of cold or of an indifferent temperature. By heat we mean any degree above the normal temperature of the body. By cold we mean any degree below the normal temperature of the body. An indifferent temperature is approximately the ordinary normal body-heat. To avoid or prevent reaction, the application must be continuous. This is its essential feature. In keeping with the classification given, we may discuss the subject under three distinct heads, to wit:

**I. Non-reactive Applications of Heat.**—If heat is applied to the body-surface or any part of it continuously, the first effect will be one of relaxation of the skin and of its component parts. This effect is partly physical, partly physiological. The relaxation consists in a yielding, as it were, of the fibrous or erectile elements in the make-up of the skin. The skin will be less tense and will show a condition of "velvety fulness"—to borrow one of Priessnitz' characteristic epigrammatic expressions. The process of relaxation will involve the contractile elements in the structure of the vessel-walls. The wall of the vessel will lose its tone and a collapse of the tube will result. The tube will become inelastic like a bag.

Naturally it will accommodate more blood than in its previous firm and elastic state. The blood will crowd into the baggy vessels and an increase in the quantity of blood is the result while the blood-pressure does not rise in proportion.

The term "blood-pressure" is adapted from the pressure of an elastic vessel-wall upon the column of blood in the vessel or, if you please, the pressure of a column of blood upon the walls of its container. Inasmuch as the pumping force of the heart represents the *vis a tergo* which furnishes the pressure upon the blood column and, through the latter, upon the vessel-wall, it is synonymous with what we designated as blood-pressure. This is the intravascular pressure which is the joint product of the pressure of the blood on the vessel-wall and the amount of resistance offered by the latter. When the resisting power of the vessel-wall

is exhausted and the circular fibers of the arterial coat are completely relaxed, the blood-pressure (intravascular) becomes less. If this action involves the surface of the whole body, less demand will be made upon the heart because the blood-mass in active circulation in the interior of the body has been diminished. This is the primary effect of a continuous application of heat.

In what respect does this primary effect of continuous heat differ from the secondary hyperemia produced by a reactive application of cold, e. g., by a cold moist pack? The violent (primary) contracting action of the latter increases blood-pressure in a centripetal direction, i. e., toward the heart. The resisting energy of the vessels is taxed, beginning with the smallest arteries in the skin and continuing inward toward the central power-station (heart). The heart is finally reached and subjected to a strain. It is called upon to resist and overcome the pressure of thousands of columns of blood surging toward it. This presupposes a certain degree of soundness on the part of the heart-muscles to resist the primary action of a reactive application of cold. When "reaction" occurs, the direction of the pressure is centrifugal, i. e., away from the heart. In the case of a continuous application of heat to the body-surface, the direction of the pressure of blood is at once centrifugal. The heart is subjected to no strain. This is the great difference between the two kinds of application. We may also add that there is no undue strain of the vessel-walls in a continuous application of heat. The latter, therefore, is by all odds a safer and better application in all cases where the resisting capacity of the heart-muscle and of the vessel-walls is doubtful, owing to organic disease of the heart or degenerative changes in the walls of the arteries. The same holds good in cases where there is a tendency toward internal congestions. This is notoriously the case in all organic diseases of the kidneys.

When after an application of heat, the vessel-walls are relaxed, the blood-mass being increased while the blood-pressure is diminished, a condition of superoxidation

in the hyperemic cutaneous structures supervenes. The increase, as we have seen, is in the arterial blood. There is more oxygen in the cutaneous tissues than under ordinary conditions. A number of effects are bound to follow in physiological sequence. Metabolism in the hyperemic structures becomes more active. Combustion is more rapid and more intense. There is a greater output of heat. The organism at once tries to throw off the surplus heat. The skin becomes active, radiation of heat-units takes place, the skin sweats. Diaphoresis, as we have seen on a previous occasion, is a process of forcible elimination of waste-heat. The presence of an increased amount of arterial (oxygen-carrying) blood in the body-surface, makes the latter and the contiguous territory a less favorable culture-soil for germs of various kinds. Germs are killed whenever oxygen in physiological quantity is present. If the amount of oxygen is increased, the germ-killing power of the tissues becomes still greater. In the language of latter-day pathology, the opsonic index of the body is raised.

Still another physiological effect follows a continuous application of heat. The forcible radiation of heat-units eventually lessens the proportionate amount of liquids in the body. The organism, in its metabolic, self-sustaining efforts, works under higher pressure. The absorbent vessels share in the increased activity, in fact they perform the major portion of the task of keeping the machinery in motion. Absorption becomes more active and intense. Adding to this the vastly augmented elimination through the skin, we can readily understand that regeneration of the physiological elements of the body is a necessary result.

The therapeutic indications are clear. They refer to all conditions of autointoxication or retention of waste in the body. Auto-intoxication in one of its forms is the biggest and most important etiological factor in medicine today. We are only beginning to understand its overtowering importance, thanks to the labors of Metchnikoff and Bouchard. It suggests the etiology and pathology of such common conditions as

rheumatism, gout, neuralgia, biliousness and the thousand and one ailments of the organs of assimilation and elimination. It furnishes a tangible and plausible explanation of the many disorders, classified as "functional" and "reflex" diseases.

In all these conditions nonreactive applications of heat furnish a positive and rational therapeutic method. They need not necessarily be applications of hot water. Superheated air and dry heat from incandescent electric globes have become popular modes of application with many physicians nowadays. The physiological effects produced by dry heat are suggested by the statements made above. In the light of the latter no one ought to have any difficulty in understanding the theory of the so-called "baking" so extensively employed in the treatment of rheumatism nowadays. We shall have occasion to discuss the details of technic on a future occasion.

2. **Non-reactive Applications of Cold.**—There is probably no subject in the whole domain of physiotherapy that is so thoroughly misunderstood as the use of cold water. A careful consideration of this subject is well worth our while.

What is the result of a continuous (non-reactive) application of cold? Cold, in and of itself, is the negation of life because all the manifestations of life depend on, are identified with and produce heat. If cold is continuously applied to the body-surface, the structural elements that enter into the anatomical make-up of the skin are contracted. The blood-mass is lessened because the vessels contract. The skin is poorly nourished under these conditions and its functions decrease accordingly. The respiratory function of the skin as well as its diaphoretic action is depressed. The results are retention of waste, a favorable condition for the establishment of autointoxication in its manifold forms, a development of culture-soils for germ-life and coincident destruction of the opsonic resisting power of the body. The tendency of organic activity is under these conditions in the direction of retrograde changes. The grand finale must be suspension of

vitality or death. Let us remember once for all that the effects of continuous non-reactive applications of cold are to be studied and understood so that we may be better able to avoid and prevent them. Their use is never proper or indicated.

Let us quote a familiar example. The common treatment of *heat-stroke* in vogue in most of our hospitals consists in the continuous application of cold. The patient who has been exhausted by heat is prostrated. The metabolic machinery of the body is working under lower pressure, excretion of waste ( $\text{CO}_2$ , etc.) is impaired, toxins are formed in the organism and, carried by the blood-current. To put such a patient in a continuous cold-water bath, as is done in most of the hospitals, is contrary to all laws of physiology. There is no word in the English language that can adequately express the absurdity of such a procedure. By applying continuous cold to a heat-victim means to lessen his chances of recovery by encouraging the multiplication and dissemination of toxins and preventing their excretion. The pores of the skin are closed, no heat-units are radiated, the patient burns up in an internal fire and is, in addition to all this, poisoned by the toxic material within. In these cases the skin should be stimulated and its function enhanced and intensified. Heat is the proper agent, not cold! This example teaches us the physiological effects of continuous cold applications and shows why they should not be used.

Let us quote another familiar example. The *ice-bag*, in cases of sprained ankle or for that matter in cases of appendicitis and other congestive and inflammatory conditions, is still used by the many who know nothing about hydrotherapy and the physiological effects of heat and cold. Its antiphlogistic effect is a myth; the patient recovers, not as a result of the treatment, but in spite of it. Frequently enough the recovery is incomplete because of the damage done by ignorance. In such conditions as those mentioned, continuous cold is opposed to every intention of nature. In cases of *sprained ankle* the object of treatment should

be to encourage the healing process, to increase the nutrition of the part, to stimulate absorption. This is accomplished by heat aided by other suitable means (e. g., massage). The ice-bag depresses the nutrition and functional capacity of the part, prevents absorption, favors chronic irritation, congestion, infection and germ-growth, and inhibits repair. In cases of *appendicitis* in the first stage heat will stimulate the part and increase its resisting power, not to speak of the anodyne action of heat. If infection has taken place, heat will increase the supply of blood and, therefore, the amount of the oxygen-carrying, germ-destroying element. Cold would take vitality away from the part and aggravate the condition.

The same holds good in congestive and *inflammatory conditions* anywhere in the body. Occasional cooling of the inflamed region, as practised by Priessnitz, is proper. Freezing the part by continuous applications of cold is always wrong and dangerous. The ice-bag in pneumonia is less objectionable because the application does not reach the inflamed area and, for this reason, as an antiphlogistic is inert. Its action has nothing whatever to do with the effect which is ordinarily attributed to it in these cases. The same may be said of the ice-bag in meningitis. Of these conditions and the use of the ice-bag we shall have occasion to speak later on. Let us remember that continuous applications of cold should be studied only with reference to the reasons why they should not be used. Therapeutically they are, *per se*, out of the question.

3. **Continuous Applications of Indifferent Temperature.**—That the effects which might possibly follow these applications are not produced by the thermic element, is too plain to require demonstration. The effects are purely physical (mechanical). On a previous occasion we referred to endosmosis of water through the skin. The tissues of the skin take up watery elements and thus get into a quasi-edematous condition. In this way the sensibility of the skin or rather of the terminal corpuscles of

the nervous system is obtunded. The response of these structures to outside impression is diminished and a condition of quietude of the central nervous system is established. The applications, therefore, are said to produce a sedative effect. It is needless to refer to their cleansing action, a hygienic and therapeutic effect not to be underrated. The principal feature of these applications is the absence of thermic shock.

**External and Internal Uses of Water.**—Our discussion up to this time has been in reference to *external* applications of heat or cold through the agency of water as the carrier of the thermic agent. The principles underlying the physiological effects and therapeutic uses of these applications do not differ from those governing the *internal* uses of water. Here again the effects are either physical (mechanical) or physiological (thermic). Frequently both physical and physiological effects are included in the therapeutic action of one kind of application.

**Physical (Mechanical) Effects.**—These effects follow if water is introduced into the body or into any of the cavities of the body either for the purpose of increasing the proportion of watery elements in the body (drinking large quantities of water, introducing water or salt solution by hypodermic or intravenous injection or by hydroclysis) or for the purpose of irrigating or cleansing (colon flushing, bladder irrigation). Inasmuch as the drinking of large quantities of water irrigates and cleanses the organs of excretion (skin, kidneys), the mechanical action of water-drinking may be said to be physiological in a sense. In these uses of water the idea of the therapeutic use of temperature is not included. The water carries an indifferent temperature.

**Physiological (Thermic) Effects.**—Short applications of hot or more particularly of cold water to the mucous membrane of the rectum produces a thermic shock which, in turn, is followed by a powerful alterant, stimulant and antispasmodic action. These applications are used to combat hysterical conditions and for the purpose of resuscita-

tion. If the applications are prolonged, their effects are produced according to the general principles which we have laid down for the corresponding external applications of water, hot or cold. Continuous applications of heat to the gastric mucous membrane produce effects which are analogous to those following continuous immersion of the body surface in hot water. The continuous use of cold in the stomach is of course wrong in principle and disastrous in its effect. The drinking of ice-water, cold beer, soda-water and the eating of ice-cream, especially when the stomach is empty, must be most emphatically condemned. The vessels of the stomach are contracted, the function retarded or entirely suspended, a passive hyperemia results, the tone of the stomach-wall is destroyed and catarrhal thickening follows. Thus the legion of stomach disorders is produced which makes our ice-water drinking and ice-cream consuming American people dyspeptics and invalids.

In conclusion let us remember that heat and cold in the hydrotherapeutic sense do not represent extreme degrees of high and low temperature but only such degrees as are compatible with the contracting and relaxing function of the tissues of the human body. Extreme degrees of heat and cold, such as are used in surgery for the stoppage of hemorrhage from a bleeding surface, have no hydrotherapeutic significance. Their effects are mechanical (contraction of tissue *en masse*) and chemical (coagulation of albumen in the tissues and in the blood).

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#### THE POST-GRADUATE COURSE OF THERAPEUTICS

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In my work upon the first lesson of this course I soon reached the conclusion that it involved considerable labor, more perchance than some were able to give. The satisfaction, however, of being able to store away much practical information that would have its fruition in coming years amply justified such an expenditure of time. A little period and labor each day would meet this requirement.

From my experience with physicians I know there are some who are popular and have a practice that is not based entirely upon the extent of their knowledge of medicine. They are little interested and have no special aspiration for the acquisition of modern scientific therapeutics.

There are others who simulate the attitude of some members in the labor unions of getting much for little. This sentiment does not meet the general demands of society today. Truly, "there is no excellence without labor." Verily, the view presented by Solomon is in conformity with this conception: "Whatsoever thy hand findeth to do, do it, with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave whither thou goest."

In reply to the objections of several members relative to the number of questions Dr. Butler assumes a quasi agnostic attitude, yet expresses his desire in the performance of the work on the part of the students. If this is conscientiously done, very little extra labor would be required to write the responses to the questions.

In view of the great amount of labor and expense involved in the preparation of this scheme for the betterment of the subscribers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE it seemingly is an act of misappreciation either to ignore or take exceptions to the monthly requirements of our good friend, Dr. Butler. As Professor of Therapeutics and Clinical Medicine, he would not be likely to impose a heavier task than we are able to accomplish.

In reply to the question in the lesson relative to the reasons for the proportions of the ingredients in the section on The Laxative Pill, one member stated "that the combination worked." This reason was no reason at all, yet strictly in accord with much of the empiric practice of galenic medicine.

In the January, 1908, number of *Correct English* (a highly interesting and practical educational periodical for cultured people) the editor, Miss Josephine Turck Baker, of Evanston, truly says: "If you can't tell why, you don't know why."

The truism presented by the Psalmist, "Man is fearfully and wonderfully made," has been verified in countless instances, and in the delicate recognition of this fact it is not surprising that it would be difficult, and even impossible, always to ascertain the cause of a deviation from the normal condition. The state developed by this aberration unfolds a most important and profound problem in which a knowledge of the physiological action of remedies becomes a supreme necessity. Without this comprehension the remedies applied fail as scientific agents. In their proper adjustment and harmony to the actual condition the noble ideals of the physician are attained and the afflictions of life are mitigated or the patient restored to health. Toward the restoration of the status of modern medicine, largely attributable to the teachings of the schools and that of medical literature, an inviting field meets the vision. The reputation of the distinguished educators, represented by Dr. Austin Flint, Sr., of whose first edition of his work on "The Practice of Medicine" a critic said the therapeutics were "*nil*." Later the views of Osler and others have been accepted by the lesser lights of the profession as emanations of Holy Writ.

The dicta of the textbooks in use inculcate the idea that certain diseases pursue a self-limited course uninfluenced by any medicinal remedies, and what is accomplished is mainly due to the trained nurse and the "*vis medicatrix naturæ*." The sequel is well illustrated by an incident related by Judge Collamer, at one time United States Senator from Vermont. In one of his lectures on "Medical Jurisprudence" he said that an old physician of that State was in the habit of taking the credit for his services when the patient recovered, but when he died, it was the Lord's work.

Aside from the fact sought to be accomplished by the administration of a galenic drug, the purpose may be thwarted by the existence of a by-product. This uncertainty of result reveals one great advantage in the use of the alkaloids, and greater simplicity and accuracy in the study of the effects of

drugs. The great importance of a complete mastery of this branch of medicine, emphasized immensely, as it has been, by the senior editor of *THE CLINIC*, comes as a *renaissance*, and evolves greater confidence in the efficiency of medicaments in cases where the diagnosis is somewhat obscure. In this contingency a recognition of the manifest condition of system expressed in the symptomatology leads the way toward scientific achievements. In the realization of the *status quo* of the profession we are fully cognizant of the fact that we have not attained "the heights" where, as for Napoleon, "there are no other fields to conquer."

L. S. BLACKWELL.

Perth Amboy, N. J.

#### SELECTIVE CELL-ACTION

I do not wish to appear aggressive or to cast any reflections on the good and appreciated work of Father Virchow, but to me the idea of selective cell-action given by this scientist does not quite hold good. The cells of the body of the various tissues have no fixed formulæ, showing that at no time are the cells of a tissue fixed.

We understand that the metabolism is constantly going on and the heat of the body is maintained by chemical action in the tissue-cells themselves. One of the principal actions that takes place is that connected with the gases of the blood. We know that the cell generates carbonic acid gas, and we know also that the blood returning from the tissues is heavily charged with it. We also know that when the blood leaves the lungs it is surcharged with oxygen and returns to them greatly lessened in it. This leads us to believe that the free oxygen is given up to the bodies of greater chemical affinity and that the carbonic acid gas is given up to the blood for the same reason. You may ask, how does the blood lose its carbonic acid gas when returning to the lungs. It is by diffusion, as it is only loosely held in combination. The carbonic acid gas is absolute evidence that a chemical change takes place. We also know that oxygen is not the cause of it, unless this action takes place in the

blood itself, for which there is nothing of past experience to show and which we have reason to believe does not occur.

We know from use of the microscope that there are many different kinds of cells, as connective tissue, epithelium, muscular tissue, etc. We know that each tissue is different in its cell composition and that it is a liquid compound forming them, making the cell and nuclear composition. We know that the cell-contents has an affinity for certain stains, and also that it has the nucleus and so forth. Then is this not evidence that other things outside of the general composition of the cell-matter may enter into its composition either by chemical change or by simple suspension? Since the tissues vary in composition almost each day or hour, this is evidence to disprove selective cell-action. If they were of a definite composition then the great affinity for the lacking thing would be clear, but foreign substance would still be a question, as to how it could enter a definite compound.

Now let us look at this matter from a common-sense standpoint and trace it from the intestinal tract to the cell.

Food must be liquefied before it enters the blood. This is done in the intestinal tract, absorption beginning in the mouth and continuing through the entire tract. We all understand the physiology of the process. It does not enter the blood as fast as it becomes liquid, but only as the blood will take up, that is, to saturation. All above this amount remains in the digestive tract until the blood can take it up, which in some cases is never, as the next meal comes and adds another quantity and keeps the intestinal tract thoroughly full all the time. This digested matter ferments and decomposes and coats the tract from one end to the other, this accounting for the saying, "As is the tongue so is the intestinal tract." A coated tongue is the sign of too much food.

Now back to our subject. We all agree that every tissue is thoroughly bathed with blood, reaching and surrounding every cell. Then every cell of the body is subjected to a solution saturated with carbon, nitrogen,

oxygen and other useful constituents for forming compounds with the cells of the different tissues. Each set of cells having different cell-contents and meeting with the same saturated blood, forms compounds peculiar to its own conditions. For example, say one tissue be called potassium, another silver, another sodium, and the circulating medium be hydrochloric acid. One can readily see that the same fluid in contact with each tissue would form a different compound. The blood keeps, as nearly as possible, the cell-contents standardized, and a chemical action takes place and emits carbonic acid gas, thus keeping up the body-warmth through the chemical action.

I believe also that the food-mass in the bowel acts as an absorbent for poisonous materials, taking them from the circulation as it passes through the larger intestine. Did you never wonder why the vessels are so thick and plentiful about the lower bowel, especially the inferior hemorrhoidal?

I should be glad to see other ideas on the above and will answer any questions I can to make my idea plain if not so made in this article.

G. LLEWELLYN BAUGHMAN.

Rollinsville, Colo.

### INCOMPATIBILITY OF ALKALOIDS AND BROMIDES

Anent Dr. E.'s criticism. "Don't give up the ship." "One swallow doesn't make summer," but one swallow of a mixture of strychnine sulphate and potassium bromide might make a corpse, especially if the solution has been in use for several days, say an 8-ounce mixture given in dram-doses.

A patient down here died from evident strychnine poisoning by taking the final dose of an 8-ounce mixture of the above ingredients. With a shake label all will be well, but otherwise I should dislike to give such a mixture. I use the word "mixture" advisedly instead of "solution," though to the eye, when prepared, a perfectly clear mixture may result.

A German pharmacist who worked with Tromsdorff and Merck advised me *never*

to combine the above in a prescription without calling the writer's attention to what was liable to occur, and then put on "Shake" in big letters. This man used only Merck's chemicals and alkaloids for prescriptions.

W. TAYLOR EDMUNDS.

Ferguson, S. C.

### HYPODERMIC MEDICATION

There is no surgical procedure resorted to by physicians with half the frequency as is the hypodermic injection, and it is perhaps this very familiarity with the procedure which breeds the seeming contempt with which a great many practitioners regard it. However, a little consideration of the subject and a little attention to details will be more than repaid by improved results.

There are four points to consider *before* making a hypodermic injection:

1. The condition of the instrument.
2. The purity and solubility of the medicament.
3. The selection of the site of injection.
4. The preparation of the site of injection.

First: The instrument should be of a pattern and material which will enable it to be easily cleansed and sterilized, and this requirement eliminates the syringes which have leather or rubber pistons, and leaves for our consideration those of all glass, all metal, and of glass with mineral- (asbestos) packed plunger.

The first kind is very easy to care for, but rather fragile, as the grinding of the glass to make the plunger fit air-tight seems to weaken it. The second kind is very durable, but must be taken apart and wiped dry each time it is used, to prevent rusting. The third kind, to my mind, is the ideal form of instrument. It needs very little care to keep it in an aseptic condition, and, with careful use, is reasonably durable. The glass instruments offer also the advantage that one can *see* whether or not one has expressed all the bubbles of air.

The needle can be boiled in a teaspoon over a lamp before being used. It should never be used more than three or four times,

as it becomes blunted by use and causes unnecessary pain. It is better, when time suffices, to boil the whole instrument before using it, but in cases of urgency the time spent in doing this might prove fatal; and so here it is better to risk the possibility of a local infection rather than the loss of a life. The syringe should always be tested to be sure that it is in working order before the needle is introduced.

Second: This point is met by buying goods from those houses alone whose reputation for quality of output is above suspicion and then making a personal test of the solubility of the various hypodermic tablets.

Third: The site of injection should be selected where (1) the tissues are fairly loose; (2) the lymphatic circulation is free; (3) there are no large blood-vessels near the surface; (4) there is least free cutaneous nerve-supply; (5) there is least danger of friction; (6) there is easy access to the part.

Because, if the tissues are too firm and unyielding the injection will give unnecessary pain; the medicaments are carried into the circulation largely by the lymphatic system, and free lymphatic supply means rapid absorption; the accidental injection of powerful remedies in solution into a large vein is usually attended by alarming symptoms; the less free the cutaneous nerve-supply the less danger of causing pain by striking a nerve-end; the friction of the clothes or other parts of the body may set up irritation at the point of injection; and if anything should go wrong, it is important that free access to the part be obtainable.

When a patient is fully dressed the part of easiest access which conforms to these requirements is the external aspect of the forearm or arm. When a patient is in bed the injection may be made over the abdomen or the anterior or external aspect of the thigh. The last-named site is the one I choose when practicable, as the cutaneous nerve-supply is here so poor that nine times out of ten the insertion of the needle is entirely painless.

Fourth: In preparing the site of injection it should be thoroughly scrubbed with soap

and water and rinsed off with boiled water. No antiseptic is, as a rule, necessary.

For a strictly hypodermic injection the needle should not penetrate the muscular tissues, but the contents of the syringe should be discharged into the subcutaneous reticular tissue, and not into the skin itself.

The skin at the point of injection should be firmly grasped for a moment by the thumb and finger of the left hand to cause partial pressure-anesthesia, and the needle should be quickly introduced its full length and then withdrawn about 1-8 inch before the injection is made. This latter precaution will obviate trouble even if the needle should pierce a small vein.

The amount of sterile water used for the injection should be no greater than is necessary to dissolve thoroughly the medicament, as a large volume of fluid causes unnecessary pain.

Some authorities assert that the nearer to the site of the pain to be relieved the injection is made the more prompt will be the relief, and this suggestion may be followed, under the restrictions mentioned above, regarding the choice of a site for injection.

After using the syringe it should be thoroughly cleansed and dried and replaced in its case, which should be aseptic and always kept in a sanitary condition.

GEO. B. LAKE.

Wolcottsville, Ind.

## THE ALKALOIDS

The list which follows is submitted by Dr. M. G. Price of Mosheim, Tennessee:

NAME	CHEM. FORMULA
Aconitine, amorph.	$C_{36}H_{46}NO_{12}$
Apomorphine	$C_{17}H_{17}NO_2 \cdot HCl$
Aspidospermine	$C_{22}H_{30}N_2O_2$
Atropine	$C_{17}H_{23}NO_3$
Avenin	$C_{56}H_{71}NO_{18} (?)$
Berberine	$C_{41}H_{34}NO_{11}$
Boldine	None given
Brucine	$C_{23}H_{26}N_2O_4 + 4H_2O$
Caffeine	$C_8H_{10}N_4O_2 + H_2O$
Cocaine	$C_{17}H_{21}NO_4$
Codeine	$C_{18}H_{21}NO_2$
Colchicine	$C_{22}H_{25}NO_6$
Coniine	$C_8H_{17}N$
Duboisine	$C_{17}H_{23}NO_3$
Emetine	$C_{15}H_{22}NO_2$
Eserine	$C_{16}H_{21}N_3O_2$



Gelseminine	$C_{12}H_{14}O_2N$
Guaranine	$C_8H_{10}N_4O_2$
Heroin	
Hydrastine	$C_{21}H_{21}NO_6$
Hydrastinine	$C_{11}H_{11}NO_2$
Hyoscyne	$C_{17}H_{21}NO_4$
Hyoscyamine	$C_{17}H_{23}NO_3$
Morphine	$C_{17}H_{19}NO_3 + H_2O$
Muscarine	$C_5H_{15}NO_3, HNO_3$
Narceine	$C_{23}H_{29}NO_6, C_2H_4O_2$
Physostigmine	$C_{15}H_{21}N_3O_2 (?)$
Pilocarpine	$C_{11}H_{16}N_2O_2$
Quinine	$C_{20}H_{24}N_2O_2 + 3H_2O$
Sparteine	$C_{15}H_{26}N_2$
Strychnine	$C_{21}H_{22}N_2O_2$
Veratrine	$C_{32}H_{49}NO_9 + H_2O$

### COUNTERIRRITANTS AND THEIR MODE OF ACTION

On page 270, Part I, Lesson 2, of the Postgraduate Course, the statement is made, under the heading "Vesicants," that the effusion of serum resulting from them is found between the epidermis and dermis. Instead of bothering you with a drawing, to prove the anatomic fallacy of this statement, I would refer to any drawing illustrating the anatomy of the skin in some book on histology.

The skin is divided, first, into two main divisions, the epidermis and dermis. The former contains, from below up, the stratum "germinativum," stratum "granulosum," stratum "lucidum," and stratum "corneum." The dermis contains elastic and fibrous connective tissue, various forms of cells, smooth muscle-fibers, blood-vessels, nerves, glands, etc. As we all know, nerve-endings may extend into the epidermis, and of course ducts of sweat-and oil-glands pass through the epidermis to the outside world.

Now what would result should a blister form between the epidermis and dermis. On removing the serum and its covering we would get an "acute ulcer" which could only heal by obtaining cells from the stratum germinativum at the circumference of the ulcer. What really does occur is this, and clinically we see it often enough:

On removing the transparent covering of a blister, a red and very sensitive surface is seen studded with minute papillæ. In two or three days this surface is no longer sensitive because the productive layer of the epidermis (the stratum germinativum)

has not been destroyed. A pustule or a burn of the second degree shows histologically an absence of this germinative layer, and hence the healing will be slower, since the resulting granulation-tissue must receive cells from the stratum germinativum to cover it.

Now a word as to the *modus operandi* of counterirritants. I believe in the reflex-stimulation theory and that the blood-vessels allow the passage of serum, relaxation of their walls resulting through their vasomotor supply. The following simple experiment seems to prove this:

To the lower extremities of a hemiplegic apply mustard plasters of equal strength, choosing two corresponding sites on the legs. On the unaffected leg will appear the characteristic inflammation, but on the paralyzed limb, sensation being gone, the skin becomes moist and different in appearance from the other side, a condition not unlike that which we find when two moist skin-surfaces are in contact.

St. Paul, Minn. E. OLANDER.

[We are sorry that lack of space made it impossible for us to publish this last month. Dr. Olander's little article is important and should be read very carefully. It is just such criticism as this that we want to elicit. —ED.]

### CARING FOR THE HYPODERMIC SYRINGE

I always carry a small bottle of alcohol with which I rinse the needle and barrel of the syringe by drawing up a syringe-ful and, after holding it in the barrel for a moment, expel it by driving down the piston. Then remove the needle and replace both in the case. Since using the alcohol as a rinse, I do not use wires and have no trouble with rusty or clogged needles.

WM. C. POST.

Maquoketa, Ia.

### COMMENTS ON THE LESSON

We have printed this month a number of articles from students in the Postgraduate

Course, giving comments on the lessons. Some of these are general in character, others definite and detailed, and the lessons reviewed date back to Number One. We are glad to have these articles, and we hope that those published this month will stimulate others to "go and do likewise." Remember, however, that the space at our disposal for this part of the work is very small; therefore, make your points in the fewest possible words, but be lucid. We want discussion, and we want to give everyone a hearing.

There is still plenty of time for new students to enroll. Come in as soon as you can, and take up the back lessons as you find leisure. You can go right ahead with the current lessons without delay. The first three lessons have been reprinted in pamphlet form and will be supplied free to any subscriber.

**A Question Box.**—One of our students suggests that it would be a good plan to open a "Question Box," where everyone could come with queries on the lessons. This would undoubtedly lead to discussion and greater definiteness of statement. Next month, therefore, we will open the "Question Box." The queries will be signed by initials only, so that the identity of the questioner will be concealed, this permitting larger latitude to the questioner. Write your query on a separate sheet of paper, so that it can be readily separated from your answers and be given immediate consideration.

**Variation in Dosage.**—Dr. Jas. A. DeMoss, Thayer, Kansas, answers this question as follows: "Our dosage can never be uniform, in administering remedies to our patients, for obvious reasons. Constitutions, disease conditions and symptomatology are never identical in any two cases. Each day, to the general practitioner, has its strangeness, its surprises, its victories easily won and its battles hard contested. The ammunition must vary; not over charge, not under charge, nor discharge without reason, and judgment for one's aim. Our patients differ in age, in weight, in temperament, in drug toleration, in idiosyncrasies, in systemic conditions, in eliminative processes, in locality, in personal habits, in racial dis-

tinctions, in sex consideration, in powers of digestion and assimilation, and in many, many ways which demand a careful consideration in safe and effective quantities in drug indication." This seems pretty well to answer the question, in epitome.

**How Drugs Taken by Mouth Get Into Circulation.**—Dr. L. H. Zeuch, of Wheatfield, Indiana, answers this question as follows: "Direct, through osmosis from the mucous membrane in the mouth. Direct, through stomach and intestinal wall; absorption through the portal circulation; absorption through lacteals and thoracic duct. Through cell osmosis, selective (Waugh)."

**Why the Alimentary Canal Should be Cleaned out First to Secure Best Drug-Action.**—We should be inclined to give these three reasons: (1) Because a clean mucosa is a more actively functioning one, and absorbs the medicine more readily; (2) because "cleaning out" removes a lot of poisonous waste, from the intestines whose absorption adds to the intensity of the disease-process; (3) because proper catharsis serves as a "drain" to the body, carrying off a certain amount of the poisons which have accumulated in the blood and tissues, this favoring healthy nutritional processes. The nerve-centers being poisoned, react more sluggishly to normal stimuli, thus vitiating all the vital functions; removal of the poisons favors more healthy nerve-reactions. Dr. Lucius H. Zeuch, Wheatfield, Indiana, says that "osmosis is favored by abstracting fluids from the intestinal cells (as in the hydragog action of salines) rendering them eager to take up solutions." Dr. J. H. Varnum, Benton Ridge, Ohio, says: "The action of the liver is also important and must be considered when medicines are given by the stomach. Any food or drug absorbed by the stomach must pass through the liver, and this organ has the property not only of turning back food or drugs that are likely to be injurious to the body but it may even destroy them. Many poisons absorbed by the stomach and blood-vessels of the intestines are carried to the liver and excreted

by that organ. They are poured with the bile into the duodenum, and thence again absorbed. Hence it is always advisable to cleanse thoroughly the intestinal tract, and to see that the liver is active, so that absorption may take place as desired."

**Advantages of Active-Principle Therapy.**—These are clearly stated by Dr. A. M. Janeway, Knoxville, Tennessee: "I understand active-principle therapy to be the use of the active principles in small doses frequently repeated. By using active-principle therapy we can administer the strongest drugs at any age, both young and old, without any bad effects. The advantages of active-principle therapy are as follows: Scientific, efficient, portable, promptly absorbed, easy to administer, unimpaired by age, and if in search for causes of failure the inertness of the drug is not to be considered. By using the active principles in granule form, the physician is able to carry a very large number of doses in a medium-sized case. I have a medium-sized case that will hold 30,000 doses of the granules. When we use the active principles we know what effect they will produce, before we administer them. The active-principle-man carries his remedies with him, as a rule, and when he goes to the bedside he doesn't have to write a prescription and send it to the drugstore, the patient being dead perhaps or beyond human help before he receives the drugs from the drugstore. My motto is: 'Physician, carry your healing paraphernalia with you.' The physician should keep a full supply of drugs or as many as possible."

**Abortion of Acute Disease.**—Says Dr. J. H. Varnum, Benton Ridge, Ohio: "One of the certain things in practice is that acute disease can be aborted. I know this to be a fact because I see it done every day, notwithstanding the fact that many so-called authorities hold to the contrary. Of course the disease must be taken at the very onset if we expect to abort it. In general this result may be secured by first thoroughly cleansing the intestinal canal and rendering it and its contents as nearly aseptic as possible. Equalize the circulation as quickly as possible. In general these steps will clear

up at least 75 percent of all conditions coming to me for treatment without development of any more serious disease. After pathological and inflammatory changes have taken place such pleasing results cannot be secured. I believe pneumonia can be aborted by clearing congested conditions before consolidation takes place. Many of the continued fevers, too, are aborted by following in this general line. These results I produce more easily by dosimetry than other methods."

**Idiosyncrasy.**—The sentiment of the majority of the students seems to be that what we call "idiosyncrasy" is a cover for our ignorance concerning the action of remedies and the conditions which influence them. A number of cases are cited to show who believe they cannot take certain remedies in the majority of instances can do this, provided a little tact is used in their administration. We should be glad to have a series of reports of genuine idiosyncrasy to be published in these columns.

The following, by Dr. H. K. Shoemaker, of Flat Rock, Ohio, is of interest: "Every physician of experience knows that there are persons who react in an unusual way to drug treatment. To explain these cases is often, indeed usually, impossible and we hide our ignorance behind a long name—'idiosyncrasy.' A few weeks ago a mother, through mistake, gave her daughter, a weak, anemic girl of sixteen years, five tablets of H-M-C, No. 2, during a period of about eight hours. There was no appreciable effect of this powerful preparation, and why was impossible for me to discern."

**Synergistic and Antagonistic Medication.**—Dr. L. N. Brainerd, Alma, Michigan, writes: "The diuretic action of acetate of potassium is materially helped by digitalis. The anesthetic effect of chloroform is materially helped by the previous ingestion of morphine. The conjoined use of cimicifuga and gelsemium in neuralgia and in myalgia is of greater value than either singly. As antagonists we may mention strychnine and aconitine in collapse, or

ergot and veratrine in pulmonary, intestinal or renal hemorrhage."

Dr. Lucius H. Zeuch, Wheatfield, Indiana, cites a very interesting case:

"An epileptic (nocturnal) was troubled with insomnia, which was only partially relieved by 15 grains of combined bromides at bedtime. Other hypnotics had a bad effect on him. I gave him a hypodermic syringeful of a solution of one part thiosinamin in twenty-five parts distilled water, every night. He also takes the bromides. The result is, he sleeps very soundly and has had only one attack of the epileptic seizures in four months, and that was due to his having lapsed in the care of his bowels. His epilepsy is acquired and I gave the thiosinamin with the hope that a general fibrosis might have caused the late appearance of his disease. It certainly aids in relieving his insomnia, if it does not help his epilepsy. A notable effect of the injection of thiosinamin is that he is unable to smoke for three or four hours after the injection without causing vomiting."

**Remedies Which Act Quickly.**—The following list is given by Dr. I. N. Brainerd, Alma, Michigan: "Ammonia water, already in solution, acts well in three minutes. Glonoin acts almost instantly, a number say; amyl nitrite in less time, and is less permanent. Morphine hypodermically acts in a few minutes. Aconitine will produce a tingling in my fauces in one minute. The effects of the ammonia last for say fifteen minutes. The action of glonoin disappears wholly in an hour; amyl nitrite not more than ten or fifteen minutes; morphine two hours; aconitine, wholly in an hour. These are from single moderate doses. Aloin acts in twelve hours, and its effects last an hour longer. Digitalin acts in an hour and lasts for six hours. Sulphonal acts in five hours, and lasts eight or ten hours longer. Lead acts (toxic action) after months of continuous ingestion, and lasts for months more unless elimination be expedited by magnesia. Phosphorus (in toxic doses) lasts for days before death ensues, or months with its fatty degeneration."

**Abortion of Acute Disease.**—"I see

very little pneumonia, but congestion of lungs is not uncommon. These cases are usually convalescent in twenty-four to forty-eight hours. Whether or not the cases of congestion would go on to pneumonia if untreated I know not. Fully developed pneumonia I am usually able to control in three or four days. Barring senile pneumonia, I have had but one case during fourteen years' practice. Treatment: Aconitine, digitalin, veratrine, thorough cleansing of alimentary tract, nuclein."

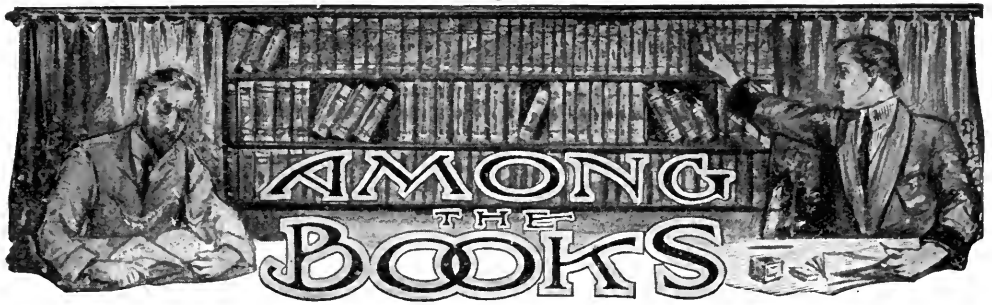
Let us have a large number of short reports, similar to this, telling character of cases, number of cases treated, basis of diagnosis, treatment followed and results. Make them concise, accurate and "snappy."

### EXAMINATION QUESTIONS

1. What six things may be learned by studying the expression of the face? What facial signs point toward cerebral excitation? the apoplectic condition? acute inflammation?
2. What are the facial signs of pulmonary disease? of intestinal or abdominal disease? disease of the female reproductive organs?
3. What is the significance of the full, broad tongue? of the shrunken tongue? of the fissured tongue? What condition of the tongue suggests the use of the alkalis and what acids?
4. Why is active-principle therapy more scientific than the use of galenicals? Of what importance is it that remedies should be palatable?
5. Tell something of the alkaloids of ipecac and their action.
6. What is the primary effect of nonreactive applications of heat and how does it differ from the secondary effect of reactive applications of cold? When is the continuous application to be preferred? What is its effect upon metabolism, skin function and germ life?
7. Describe the results following the use of nonreactive applications of cold. Is the cold-bath treatment of heatstroke rational? Why not?
8. What is the real action of applications of indifferent temperature, and how is it explained?

### RESEARCH QUESTIONS

1. Give a brief description of the relation of the eyes to disease and to drug-action.
2. What are the indications for treatment in a typical case of apoplexy and how would you meet them?
3. Write briefly of the disease-indications of the tongue and what remedies should be given to meet them.
4. Describe the skin-applications to be employed for the relief of diseases due to waste retention (muscular rheumatism for example) and tell how they act.
5. Give a complete *rational* outline for the treatment of heatstroke—employing both physical and medicinal remedies.



### FLOWER'S "OPERATING ROOM AND PATIENT"

The Operating Room and the Patient. By Russell T. Flower of the Brooklyn Post-graduate Medical School. Second edition, revised and enlarged. Philadelphia and London: W. B. Saunders Company. 1907. Price, \$2.00.

In our review of the first edition of this book in *THE CLINIC*, of 1906, page 974, we expressed ourselves strongly as to the need of proper preparation of room, instruments, operator and operated, nurses, assistants, etc., without which even the achievements of modern surgery in asepsis and antisepsis may prove futile. All these have to be known and learned, and it is not at all a matter of supererogation to have special monographs on these points. Even our best books on general surgery are not over-full with all there is needed to be known on this point from theory and experience: It is therefore a real need well supplied that this second edition of the "Operating Room and the Patient" gives both to specialist and general practitioner. The additional chapters of this second edition on general considerations in the postoperative treatment are most valuable.

### STELWAGON'S "DISEASES OF THE SKIN"

Diseases of the Skin. A Treatise for the Use of Advanced Students and Practitioners. By H. W. Stelwagon, M. D., Ph. D., Fifth edition, thoroughly revised. With 267 illustrations and 34 full-page colored and half-tone plates. Philadelphia and London:

The W. B. Saunders Company. 1907. Price, \$6.00.

The book before us contains 1124 octavo pages of text. It is reliable in its teaching, its author being neither specially neophilic nor paleophobic. The author is a practical dermatologist of vast experience, and as a teacher he knows what his pupils in the higher grades require. In every respect the book is to be recommended as the summing up of our dermatologic knowledge up to date.

### OHIO HEALTH BOARD REPORT

We are in receipt of the Annual Report of the State Board of Health of Ohio for the year 1906. There is much available material in hygiene and statistics in reports that have such sources as the Ohio Board and its Secretary.

### SALEEBY'S "CONQUEST OF CANCER"

The Conquest of Cancer. A plan of campaign; being an account of the principles and practice hitherto of the treatment of malignant growths by specific or cancrotoxic ferments. By C. W. Saleeby, M. D. New York: Frederick A. Stokes Company. Price \$1.75.

This book puts us under the obligation of reading it. Cancer is at the present studied, and this means treated also, on new chemico-vital lines. The author is not a practising but an inquiring physician, and he is therefore free from adhering irrevocably to *ex cathedra dicta*. In a certain sense the author is extra cathedral. The burden

of the author's theme is the treatment of cancer with trypsin, and on this point he is thoroughly elementary and very readable. We consider the book, as we said, obligatory on any physician who wishes to know the last our workers have to say about cancer.

#### SCHIMMEL'S "REPORT"

Semiannual Report of Schimmel & Company on Essential Oils. London and New York. October, 1907.

There is valuable information along these lines in the brochure which is of scientific as well as commercial interest.

#### "INTERNATIONAL CLINICS"

International Clinics. A Quarterly by the leading members of the medical profession throughout the world. Vol. IV, seventeenth series, 1907. Philadelphia and London: J. B. Lippincott Company. Price \$2.50.

This volume has valuable articles in the following departments: Treatment, Medicine, Surgery, Gynecology, Genitourinary Diseases, Orthopedics, Neurology, Otology. The latter article gives most valuable information about that marvelous remedy, thiosinamin. It is within the range of possibility that some of our thousands of readers may, after reading these lines, send for the Quarterly, apply the teaching of the article referred to intelligently and get a lift in the "labyrinthine" difficulties of otology for which he may be thankful the rest of his life.

#### GILLIAM'S "GYNECOLOGY"

Practical Gynecology. A Textbook for Practitioners and Students. By D. Tod Gilliam, Emeritus Professor of Gynecology in Starling Medical College. Second revised edition. F. A. Davis Company, publishers. 1907. Price \$4.50.

There is a good deal of good to be said about this book. Its claim to practicability is not a mere hackneyed expression. The author writes as a teacher who knows the needs of the members of his classes and who

instructs them for their life's work. He eschews all that might be called more ornamental than needful for the practitioner to know, and in what is needful to know in such diseases of women that are not peculiar to them the author thought best not to send off his readers to other books but treats of them in proper detail. This is thorough teaching to be grateful for. One thing more also the credit of this book is the Index of Regional Symptoms. Illustrations and mechanical make-up and price, too, of the book are very satisfactory.

#### BAUMANN'S "GONORRHEA"

Gonorrhea, Its Diagnosis and Treatment. By Fred Baumann, Ph. D., M. D. Fifty-two illustrations in the text. New York and London: D. Appleton & Company. 1908. Price \$1.50.

An excellent monograph, giving the most modern, rational, scientific and successful treatment of the disease which is claimed at the present to be more baneful than syphilis. It is a book of only 200 pages, well written and illustrated. Whether a practising physician may be willing or not to exchange his accustomed treatment for something new, an educated physician is in duty bound to know at least the latest which researches have discovered in medicine. And this little book is well calculated to give full information about the latest on gonorrhea.

#### TALBOT'S "DEVELOPMENTAL PATHOLOGY"

Developmental Pathology. By Eugene S. Talbot, D. D. S., M. D. Published by the author. For sale by The Clinic Publishing Company, Chicago. Price \$2.50.

This is a collection of essays published at various times in various medical journals illustrating, discussing and explaining the processes of growth and degeneration of the human body, especially of the head, face, nose, jaws and teeth. The author is an original thinker and a thorough-going evolutionist, and he explains pathology by the

evolution, or development, of degeneration in the struggle for existence among the organs of the human body induced by its environment. The author professes to have worked in these lines of research for the last thirty years. The form of the book in separate essays as they appeared in various journals is not only no objection to but even enhances the value of the book. Nascent medicaments are often more effective than finished products.

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#### KEYES'S "SYPHILIS"

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Syphilis. A Treatise for Practitioners. By Edward L. Keyes, Jr., M. D., Ph. D., of the New York Polyclinic. With 69 illustrations in the text and 9 plates, 7 colored. New York and London: D. Appleton & Company, 1908. Price \$5.00.

Syphilization is perhaps coextensive with civilization. Nor is it always the directly infected individual that is alone affected. No! There are parents, themselves born of noninfected parents who brought up a family of sons and daughters in purity and health. Into such a family a man infected from another infected man enters, courts one of the girls, marries her, begets children, and jeopardizes the health, the purity and the peace of at least two generations—and all this from sheer ignorance. This is the devastating story of syphilis, to fight which prophylactically men and women of influence should be banded together. But, alas! at the present time ignorance and proud conceit stand opposed to needed publicity of discussion and instruction. The clerical profession are the most mistaken on the subject of sexology, in that they imagine a purity to prevail which does not and cannot exist as long as the increasing cost of living necessarily decreases marriages. And yet, human nature and woman-nature remain the same in the healthy appetites of life, facts from which, ostrich-like, they hide their faces. And some, though few, of the medical profession, too, are in the way of prophylactic reforms. All there is left to be done is the thorough study of the evil and how to cure it, and one can only hope and

pray for the time when a merciful High Power will eject darkness from the place of light and ignorance from pretentious seats of instruction.

And as for instruction from tested theory and immense records from private practice followed studiously for the term of two generations, this book by the son of the elder Keyes stands, we are inclined to think, without a rival. But it is to be remembered that, as the title reads, the book is a treatise for practitioners, yes, even for those who may have practised hitherto under false theories and unjustified assumptions. But the book is not for elementary students. That it is the latest both scientifically and statistically need hardly be said. We thank the author for his successful effort and wish him continuous prosperity in his well-chosen career.

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#### WINSLOW'S "CLEAN MILK"

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Clean Milk. The Production and Handling of It. By Kenelm Winslow, M. D., M. D. V., B. A. L. (Harv.). New York: William R. Jenkins Company. 1907. Price \$2.50.

This book will give ample and needed information to the farmer and the town and city milk dealer, as well as to the doctor, who is expected to be expert in hygiene. It is beautifully gotten up as to print, illustrations and binding.

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#### BORDMAN'S "DISEASES OF THE BREAST"

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Diseases of the Breast, with Special Reference to Cancer. By William L. Bordman, M. D., LL. D., of the Medico-Chirurgical College of Philadelphia. Philadelphia: P. Blakiston's Son & Company. 1908. Price \$4.00.

The thoroughness of research to which our professional workers are offering their time and unwearied exertions, despite the frequent ingratitude which they meet with and the slander cast upon them by medical and religious quacks, demands monographs on the diseases of special organs and parts

of the body. Monographs are needed also for the writers of general manuals and textbooks. When a disease under treatment gives us sleepless nights and anxious days and we wish to know all that is known about it, we grasp after a special monograph. And so, if the reader has, or expects to have, a mammary case entrusted to him, he will consult the best interests of himself as well as his patient by making a thorough study of this book.

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**BEZOLD AND SIEBENMANN'S  
"OTOLOGY"**

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Otology. A Textbook by Bezold and Siebenmann. Translated by Dr. J. Holinger, of Chicago. Published by E. H. Colegrove, Company Chicago. 1908. Price \$3.50.

The studious American physician and student will find in these thirty-two lectures many a new idea in every department of otology which will profit him. The original authors are specialists of high reputation in Europe for scientific accuracy and practical success. And the American translator did his work, it seems to us, *con amore*, for it is excellently done. The publishers also did a fine work by this in every way valuable book.

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**"INTERNATIONAL MEDICAL ANNUAL"**

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The International Medical Annual. A Year Book of Treatment and Practitioner's Index. 1908. Twenty-sixth year. New York: E. B. Treat & Company. Price \$3.50.

We have had the pleasure of reviewing this Annual for a number of years and never had occasion of speaking anything but in praise of it, and after careful examination of this year's volume we are again glad to recommend it to our readers. We have in this volume a concise but not garbled statement of all the advances made in medical science and practice during the year 1907. If anything is omitted here it is because nothing of interest was done in that thing during the last year. But you are sure

to find it in an annual of a year or two previous. Indeed, we find the set of annuals back to 1893 in our library to be a most efficient historical record of medical items in better detail than medical histories can or do give.

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**MILLER'S "CORRECTION OF FEATURAL IMPERFECTIONS"**

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The Correction of Featural Imperfections. By Chas. C. Miller. Published by the Author. Chicago. Price \$1.50.

The book might be denominated "Surgical Cosmetics," but whatever be the name, the subject is important and difficult and requires as much practice and skill as major surgery, and the general practitioner had better be cautious not to make blunders at the start of his practice. Let him be advised to read this little book twice.

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**HORWITZ'S "COMPEND OF SURGERY"**

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Compend of Surgery for Students and Physicians, Including Minor Surgery and Bandaging. By O. Horwitz, B. S., M. D. Sixth edition, revised and enlarged and largely illustrated, and many formulas given. Philadelphia: P. Blakiston's Son & Company. 1907. Price \$1.00.

This is one of the best compends for self and reciprocal rehearsals.

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**"CONFESSIO MEDICI"**

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Published by The Macmillan Company, New York. Author's name not given. If people find fault with us we should remember that spots are more conspicuously seen on a white than on a black sheet, and the higher the tree the more wind it catches. Wherefore, dear reader, when you want to know in a chit-chatty, entertaining way about our profession, get this book and be edified. Price \$1.25.

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We are in receipt of The Seventh Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children, of West Haverstraw, N. Y.





#### PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## ANSWERS TO QUERIES

ANSWER TO QUERY 5287.—In the April number of *CLINICAL MEDICINE*, Query 5287, R. W. S., of Ohio, describes a form of pruritus, or itch, which seems to be hard to get rid of. I have met with this trouble and know how hard it is to cure. I will suggest that this trouble is a parasitic disease and that it has been imported to our country from Cuba or some foreign country by our boys who were in the Spanish-American war. Here is the remedy that I have never seen fail to cure, if properly used.

Take common poke-root and boil a liberal supply of the fresh root. Add to this a large cake of home-made lye soap. Let the patient strip and use a washtub to bathe in. Take a rag and use plenty of soap. Bathe all over head and ears, rubbing well with the rag. Old standing cases will have to have two or four of these baths, about three days apart; recent cases are cured by one bath. Care should be taken not to neglect the head, beard and eyebrows, in fact, the application must be thorough to be effectual. It is not very painful, as one would imagine. I have had it used on small children without complaint. After using these baths the patient will complain a few days, but gradually they get well.

Some physicians make light of this trouble, but let me tell you it is a serious matter with those who have it. There is no medical literature that I have seen that treats of it. Poke-root is the only thing that I have ever seen that will cure. Mercurial preparations are useless, so far as curing the disease is concerned. Let the Ohio brother try

this remedy and report the result through *CLINICAL MEDICINE*.

F. W. OWEN.

Lamasco, Tex.

ANSWER TO QUERY 5287.—R. W. S., Ohio, undoubtedly has a case of too much *bug* to deal with. I have treated hundreds of these cases in the last ten years. If it were a case due to nervous causes it would not become epidemic. I have seen whole neighborhoods affected with this malady and am successfully treating cases now where the disease has spread through a glass factory where 150 people work.

Treatment: First have the patient cleanse his body with some good vegetable soap; dry, and then let him use a strong sulphur ointment, twice daily. Give internally 1-4 to 1-2 grain calcium sulphide every two hours or enough for thorough saturation; at the same time giving one tablet each night containing 1-4 grain each aloin, cascarn and podophyllin. Continue persistently and your pruritus hiemalis, prairie-itch or what not will vanish.

J. HAROLD LAIL.

Anderson, Ind.

ANSWER TO QUERY 5269.—Noticing Query No. 5269 from S. C. C., New York, I beg to report a freak case I had some time ago. Patient had been in labor some time. It was very tedious, so I helped her, and upon reexamining I found a shoulder-presentation with one arm protruding through the vulva. The shoulder was well jammed and nothing

seemed to remain but to perform version; so I proceeded to anesthetize. Ready for work, I placed the patient crosswise on the bed and raised the sheets when, to my utter astonishment, I saw the child and placenta lying between the patient's legs. The child had been dead for perhaps a week. This occurs once in a few thousand cases, so I am one of the lucky ones.

J. A. POIRIER.

Forest Lake, Minn.

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ANSWER TO QUERY 5287.—I have noticed the article by R. W. S., Ohio, Query 5287, in the April issue. For several years the same pruritus gave me a great deal of trouble. We had a number of cases here, and many remedies, both internal and external, were tried. I could get very little from the books and for a long time treatment was unsatisfactory. Whether it be "pruritus hiemalis" or not, it is very decidedly a pruritus, which is its chief symptom.

R. W. S. describes it exactly as it was manifested in the cases I met with. I have never failed in a single case with the following treatment:

Bathe and apply night and morning for four consecutive days this ointment:

Precipitated sulphur.....oz.	1
Acetanilid .....	drs. 4
Balsam peru.....ozs.	1 1-2
Vaseline .....	ozs. 4

After this bathe again and be scrupulously careful in changing every stitch of clothing and bed clothing which have come in contact with the person before. This is of great importance. So far as constitutional treatment is concerned none is needed, unless there are special indications for such, except the eliminant is always beneficial. Will you ask R. W. S. if he will take time to write me about results?

O. W. HUBBARD.

Batavia, Ill.

## QUERIES

QUERY 5292.—"Bedside Urinary Analysis."—R. B. V., Arkansas, wishes to know what is the best thing for examining the urine, to use in the office or carry about. We will say that compact thoroughly reliable urinary test cases can be obtained from Betz, Hammond, Ind.; Sharp and Smith, Chicago, or any other large instrument house; a pocket case containing everything requisite for ordinary examination—urinometer, test papers, test powders for sugar, albumin, etc., together with alcohol lamp, etc., costs only very little, and with such a case and Purdy's work on "Urinary Analysis" you may feel yourself thoroughly equipped.

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QUERY 5293.—"What Kills His Patients?"—M. C. R., Arkansas, in a recent letter asks for diagnosis and treatment of a peculiar disorder which resists his best efforts. He has treated a number of patients in the last twenty years (all infants or children) and they all die regardless of age. He gives these symptoms: Attack

begins with light fever in remittent form, growing a little worse for a few days, when it may get very light and almost disappear, but the child begins to jerk on one side with one hand and foot, shows signs of paralysis, breathing hard, the head not drawn back any. By the seventh or eighth day hand and foot jerks very badly, and a little later convulsions set in and the patient dies.

It would be audacious to attempt a diagnosis from the very limited clinical facts furnished. It may be a form of meningitis, or it may be a peculiar type of autotoxemia. You do not say how high the fever runs, nor give us any idea as to the action of the bowels, condition of skin, presence or non-existence of dermal eruption, dilation or contraction of pupil, wasting of body, etc. Give us a clear idea of the progress of the disease and shed some light upon the surroundings of the patients. Also state whether birth was normal or instrumental or prolonged in any way.

Let us suggest, Doctor, that you thoroughly cleanse the patient's bowels with enemata of decinormal salt solution at body-temperature. Apply to the spine compresses wrung out of hot solution of epsom salt; give small doses of a sweetened solution of magnesium sulphate hourly after first exhibiting calomel, gr. 1-10, and podophyllin, gr. 1-67, half hourly for four doses. Push nuclein morning, noon and night six drops under the tongue and give a half teaspoonful of the following solutions alternately every two hours. Solution No. 1: Defervescent compound, 4 granules; water, 10 teaspoonfuls. Solution No. 2: Cicutine, 3 granules; gelseminine, 3 granules; water, 10 teaspoonfuls. Nourish with simple beef broth, albumen water, barley water, or a little milk and barley water. If necessary apply blisters to the base of the skull and then flying blisters the size of a quarter up and down the spine. To control the fever you have to give larger quantities of aconitine, digitalin and veratrine, and if septic conditions of the intestine become evident give the sulphocarbolates in solution to effect. Lumbar puncture and the injection of a creolin solution would suggest itself, and the use of colloidal silver might prove efficacious. Read Candler's description of *Mountain Fever* in "Every-Day Diseases of Children."

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 QUERY 5294.—"Atrophia Cutis."—W. M. M., Virginia, asks that we print this query for the readers of the journal to answer, or to answer it ourselves. The doctor adds: "This question is of the greatest importance as the young girl is growing weaker all the time and I am afraid may not live another year. I want to say that I have consulted everything I could find in medical literature, having once sent to the Surgeon General's Library for the report of a similar case. No treatment seems to avail. I have asked eminent men in the profession from other states about the case, but they know of nothing that will give the desired relief to the patient. This is my case:

"Atrophy of the skin (atrophic lines and spots), following severe case of typhoid fever, four months' duration, in a girl 18 years

old. She was 14 years old at the time of the fever. The cracking of the skin came on about one year after the fever and has continued, increasing in severity, until the present. The knees have the largest cracks, there being several transverse ones paralleling each other across the knees, though there are also lines and spots (cracks) on other parts of the body, notably on the breast, hips, back, along the spine, etc. So also many fine lines are found on the backs of the hands and feet. At the root of the spine, between the buttocks, is a considerable protrusion, or swelling, seemingly of the bone (coccyx), as it is hard to the touch. All of the lines and spots, also the lump at the end of the spine mentioned, are whitish in appearance, even glistening, and wrinkled or shrivelled, sometimes they are pink or purplish in color and intensely painful, so tender in fact that the mere weight of the bed clothing causes her to cry out in agony. There is extreme nervousness. A temperature of about 100° or 101°F. is pretty generally maintained; nausea, sometimes vomiting, is most all the time present; food is daily rejected, and not sufficient nourishment is retained to sustain life indefinitely. There is great danger of starvation. The girl is cheerful and hopeful withal, and patient to a wonderful degree. What can be done?"

This hardly seems to be such a very obscure case and we can only think that the "eminent men" and people at the Surgeon General's office failed to understand your description. From the data presented it quite evidently is one of those cases of atrophia cutis presenting striæ atrophicæ which sometimes appear to touch the borderland of scleroderma and, again, present (late) the peculiarities of morpheæ. Stelwagon gives us a fair clinical picture and under the head of striæ et maculæ atrophicæ notes a case which presented "striæ upon the abdomen after typhoid fever where there had been marked emaciation."

The "typhoid spine" we are all familiar with, and the various neuroses which may follow this disease are yet imperfectly studied or even realized. You have to deal, of course, with a trophoneurosis, and the ac-

companying neuritis accounts for the occasional pain experienced. Auboger, Bouchard, and Manouvrier observe that "linear atrophy (of the skin) developing in (or after) typhoid is of grave import. In a case reported by Bronson (see Stelwagon, p. 585) occasional shooting pains were noted and it is observed that the lower extremities—especially the knees—suffer particularly. Crocker sees a marked resemblance to scleroderma in these cases of atrophica cutis, and several cases are on record of patients sixteen or over who presented similar symptoms after "an acute fever." See Crocker, Stelwagon, etc.

More than one recent writer upon "Practice" calls attention to the peculiar changes which may follow typhoid. French's "Practice" (3rd edition) says, "atrophic lines sometimes appear after fever (typhoid) probably as the result of neuritis."

Granular fatty and hyaline degeneration often occur after severe attacks, and skin-muscles and even bones suffer markedly. The typhoid bacillus has been found by Keen in several cases of osteitis and osteomyelitis, and it is a question whether in these dermal disorders we may not have a distinct (but modified) infection by the bacillus typhosus. However, we have to deal with (1) lowered resistance; (2) perverted metabolism; (3) tissue degeneration, and possibly, infection.

Treatment is clearly indicated. Locally, washing with tar or sulphur soap, massage with a simple unguent and frequent application of a mild epsom-salt solution on compresses. Goose grease (sterile) might prove beneficial. Internally eliminants, alterative tonics and reconstructants. We should push small doses of calomel with iridin and xanthoxylin, hourly every other night, say for four doses, and give a weak saline laxative next morning. Beef juice, fruit juices, butter-milk, junket, the prepared blood-foods (sanguiferrin, somatose, etc.) should be given as well as whole-wheat and oatmeal bread or biscuit. A good digestive formula, one before meals, and iron, quinine and strychnine arsenates after food will suggest themselves. After a week give arsenic iodide,

gr. 1-67, for one week, then repeat the arsenates. If the stomach is rebellious at first feed per rectum.

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 QUERY 5295.—"The Positive Active Principle and Uncertain Tincture."—M. S., Missouri, writes as follows: "I am a 'green' alkaloidist, and as such am at a loss to know how to convert a dose of the ordinary galanics, such as tinctures, fluid extracts, into an alkaloidal dose. For example, I find a good prescription by Holt for vesical spasm containing tincture of hyoscyamus. I should like to use this same prescription but substitute hyoscyamine in it. How much should I use? There must be a rule which I should like to learn."

A certain quantity of tincture or fluid extract of hyoscyamus may contain 1-1000 grain of hyoscyamine or one-half that quantity or practically none at all. Doctor, learn to "think in alkaloids, basing your calculations upon this rule: "the smallest known-to-be effective dose repeated at intervals to effect—remedial or physiological." The alkaloidal granule represents, in the majority of instances, this "smallest known-to-be-effective dose" for an adult, and you would therefore add to each dose of your preparation 1-500 to 1-250 grain of hyoscyamine according to frequency of administration and effect you desire to procure.

For vesical spasm you can find nothing better than the following formula: Glonoin, gr. 1-250; hyoscyamine, gr. 1-500; strychnine arsenate, gr. 1-134. Or a half-strength H-M-C tablet. Of course it is necessary to find out just what causes the spasm, then remedy the condition. There can be no rule based upon unknown foundation, and the active principle contained in the common tincture, fluid extract, etc., is an unknown quantity unless you use a standardized preparation. When you do this you will find the amount of active principle supposed to be present in each dram stated upon the label.

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 QUERY 5296.—"Simple Autointoxication."—H. J. C. M., Michigan, is interested in us, our drugs, and our journal. He read the

latter and looks for it with anticipation from month to month. He also uses the alkaloïds more and more as he learns their use. He was almost a "nihilist" (therapeutically) until he began to use aconitine as we advise. "Formerly I used aconite," he writes, "but I never got satisfactory results. My doses are larger and more frequently given now—and I get results. I don't use morphine for gallstones either. I used to, like the other fellow, but now, with enough hyoscyamine and glonoin and a little strychnine, accomplish more, give better satisfaction to my patient, and feel safer myself, for I have had a few cases of morphine poisoning on my hands, the result of giving it to relieve the pains of gallstones." He continues:

"I wish you would suggest a line of treatment for the following case: Male, occupation lawyer; age 30; married eight years; weight 133 pounds, stripped; height 6 feet 1 7-8 inches; blue eyes, fair complexion, jovial disposition, small-boned, myopic and wears glasses, sleeps well and is not nervous; keeps regular hours, does not use intoxicants nor tea and coffee. Heart, lungs and kidneys normal; no albumen. Complains of cold hands and feet and looks pale and somewhat anemic. Has bad breath at times, tongue coated at base with a substance emitting a fecal odor if rubbed between fingers. This condition is almost constant and has been so about as long as patient can remember. Tonsils chronically enlarged and throat generally red and catarrhal. Complains of indigestion. Never has pain in gastric region, sometimes weight-like feeling, especially after a full meal of meat, pork in particular; cabbage, sauerkraut, pastry and bread always distress him. Has constipation, or at least is costive. Has to take 'something' all the time. Has been a furious masturbator from tenth to twelfth year, which practice was kept up until he married. Masturbated only occasionally since he was married. Has practically abandoned the habit these past six months. Has intercourse about twice weekly. The man's desire is to take on flesh, get rid of foul breath and fix up his stomach. I put him

on tonics, laxatives, antifermentatives, etc. I have had him enter the gymnasium for developmental exercise, which he patronizes about thrice weekly for one hour, indulging most in the mild exercises of hand-ball. Besides this he does plenty out-door walking also."

Thank you, Doctor, for your pleasant words. We never blame any man who depends on the galenics for being a therapeutic nihilist. Many of our friends have had success, like yourself, in the treatment of the paroxysms of gallstones, but since the hyoscine-morphine-cactin compound came in, the latter threatens to supersede completely the combination of hyoscyne, glonoin and strychnine.

The man whose case you describe suffers from his retained waste, and in spite of the excellent treatment you gave him his bowels have never been completely emptied. Let him have podophyllotoxin at bedtime and a full dose of saline laxative the next morning, and twice a week flush his colon with two or three quarts, or more, of warm water containing a teaspoonful of baking soda to each quart. The sulphocarbolates, after meals, "to effect." Of course as long as foul-smelling passages are noted, the bowel is *not* clean or empty. The best exercise for him undoubtedly would be sawing wood.

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QUERY 5297.—"Acetanilid, Antipyrin, Phenacetin: Their Standing and Use."—J. A. B., of Arkansas, asks: "Was acetanilid ever a proprietary remedy? Since the patent on phenacetin has expired can anyone make it or is the process of manufacture a secret? When the patent on antipyrin expires can anyone make it or will the process of manufacture be secret? Which drug, acetanilid, phenacetin or antipyrin, is the most powerful diaphoretic, which one is the most powerful antipyretic, which the most powerful antispasmodic, which the most powerful analgesic, which the most powerful hypnotic, which the most depressing to the heart, which the most toxic, which the most powerful antiseptic, which is quickest in action, which is most lasting in action,

and which one of the other drugs named is second to each principal one?"

Frankly, we do not feel able to answer every one of these queries, for the different drugs exert different influences under differing conditions and in various individuals. Not one of the "coal tars" named exerts a true hypnotic effect—save as it does so by relieving pain. Acetanilid (formerly "antifebrin"—a proprietary) may be made by any manufacturing chemist—is so made. For details see page 3, U. S. P. For action, etc., see Hare, "Practical Therapeutics," p. 53. Antipyrin (antipyrinum, U. S. P.; phenazonum, B. P.) is also official and nonsecret. For action, etc., see Hare, p. 93 (or other modern textbooks). A study of the action of these drugs will cause you to realize that the most "powerful diaphoretic" is also the *most toxic*, since it depends for its action upon the presence of carbonic acid in the medulla. All three drugs are "general anodynes"; acetanilid exerts a slight local analgesic action. It would be impossible to say which one of the trio is "the most powerful" analgesic. Possibly, dose for dose, acetanilid. Phenacetin may be regarded as "a rival of antipyrin in the power to remove pain." (Hare.) Antipyrin is more dangerous (dose for dose) than either of the other two drugs. Phenacetin is a distinct *nervous sedative* and has little or no effect upon the circulation unless given in very large dose. It does not cause diaphoresis as a rule. We should not regard any one drug as possessing marked antiseptic action, barring, perhaps, acetanilid.

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 QUERY 5298.—"A Persistent Hemicrania."—G. L. B., Wisconsin, writes: "As your suggestions have always served me beautifully I would ask treatment for one of my lady patients. She is a decided brunette, age 33, weight 120 pounds, height 5 feet, 4 inches, married 11 years; pregnant once four years ago, aborted at three months. Seventeen years ago she had an attack of typhoid fever, being sick about three months. Since childhood she has been subject to sick-headache at short intervals (generally attributed to sun-exposure), until eight years ago,

when she suffered a severe attack of facial neuralgia lasting about six weeks. This was followed by another form (apparently) of headache which occurs on an average of once in two weeks. These attacks begin as a disturbed feeling in the brain, the least move causing pain likened to a jar, accompanied by a general nervousness. This lasts a few hours and culminates in a concentration of severe pain in the left temple associated with extreme tenderness of the muscles at the back of the neck. Stomach irritability is always present and sometimes vomiting takes place, which however does not relieve headache. These attacks last about twelve hours and leave temple and neck sore to touch. Headaches have occurred most often at or near time of menstruation although they have not been limited to that time. From one week to generally two weeks elapse between two distinct attacks. Urine is normal; pelvic organs in healthy condition; nervous temperament; pulse, 90 sitting, 96 standing; temperature 98.6°F."

We have carefully considered the description of the above case and regret to say that we cannot, with the data at our disposal, arrive at a clear diagnosis and hence are unable to outline a positively remedial treatment. That peculiar condition which is known as "typhoid spine" may have something to do with the periodical headaches here; indeed the neuroses which follow typhoid are legion and present in kaleidoscopic variety. However, we are more than inclined to look upon the hemicrania as due likely to intestinal disorder—autointoxication. There is a headache (due to fermentative conditions with distension of the cecum) which only yields to intestinal antiseptics. The symptoms closely resemble those presented by your patient. Suppose you try a "mixed" treatment. Between the attacks give a good nervine with avenin and scutellarin, also papayotin, ten minutes prior to food, and pancreatin and sodium sulphocarbolate an hour after food. When the attack comes on give promptly blue mass and soda, gr. 1; podophyllotoxin, gr. 1-12; every half hour for six doses, and follow with a saline laxative draught;

then the three sulphocarbolates, gr. 10, every three hours, with hot water. The well-known migraine tablet may be given on beginning blue mass, etc., and another in one hour. Massage over cecal region and an enema are suggested. This will probably suffice. Vibration along spine and over abdomen every two days would prove helpful.

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QUERY 5299.—“*Purpura Fulminans?*” J. E. M., New Mexico, reports a most interesting case which merits discussion. The doctor writes: “I was called in consultation with Dr. H. last Friday to see a case of pneumonia. I arrived on the scene about 4 p. m., went in and consulted over the case named, then the doctor called me into another room to see a little two-weeks-old baby that had been ailing a few days, crying at night, cross during the day, etc. Dr. H. had seen the baby the day before, had given a little purgative, I believe, as the bowels had been inclined to be constipated, and some little anodyne to give rest. Friday morning he saw the baby and found from about half way from the knees to above the hips there was a deep red color all the way around. He thought it erysipelas; told them as I was coming he would wait until I came, and we would do the best we could, etc. When I saw it (at 4:30 p. m.) all this red area up to the navel had changed to a dark, deep blue. The temperature was 102° F., same as that morning, the bowels did not seem tight or tympanitic, but belly was round and distended, skin below and above seemed a little yellow but not much more than is often the case in babies of this age. No eruption, no moisture. Baby died at nine p. m.

“Now, gentlemen, what was it? Was it erysipelas, diabetic gangrene, symmetric gangrene, or what? In looking over Stelwagon it seems that it would come nearer coming under the head of symmetric gangrene, Raynaud’s disease, than anything else.”

We regret exceedingly that the clinical data is incomplete. We should like to have had the urine examined, mucosa of buccal

and other accessible cavities looked over and stool peculiarities noted.

The highest temperature noted, it seems, was 102° F. The child had “been ailing for a few days, crying and sleepless.” A purgative had been given (we do not know result) and an anodyne (character also unknown). There was “no eruption, no moisture,” and the child died two days after appearance of “red area.”

Erysipelas would hardly present as a red discoloration from half way above knees to above hips and change in twenty-four hours to “a dark, deep blue,” the child’s temperature meanwhile being only 103° F. Had the umbilical stump been infected we would not have the discoloration begin “above the knees.” There would be moisture and swelling about the navel. A pin-prick would have (if infected) been easily discoverable, and an erythematous area would have spread therefrom.

Raynaud’s disease does not quite coincide, so far as symptomatology goes, with the facts given. Here (Raynaud’s or symmetric gangrene) we find the extremities affected; the ear, the toes or tips of fingers. The parts are first cold and pale, then comes redness with swelling and finally either moist or dry gangrene. Mummification or ulceration marks the last stage always; in some instances resolution follows the second stage, but we could not expect this where the involved area is large. Moreover the process in Raynaud’s disease is slow and death would hardly follow as early as in this case. Symmetric gangrene is not a disease of infancy either.

We must under the circumstances consider *purpura*. Fulminant purpura might present just such symptoms as those you mention, and the systemic disturbance (of which the purpuric patch is but an evidence) would most likely prove fatal speedily to an infant. There had been, it is evident, abdominal disorder (the doctor gave a purgative and anodyne) and in purpura fulminans gastric and intestinal symptoms always exist. There may have been intestinal hemorrhages but in many severe cases the mucosa does not present hemorrhagic areas.

Marked systemic disturbance, followed by extensive cutaneous lesions on extremities or trunk, collapse and death may be given as a succinct description of one form of this malady. We think it covers your case. Read Stelwagon on the subject. Purpura, as you know, may present in infancy. It is a great pity that you did not hold a post mortem, or at least make a minute examination of the body and excretions. These cases are always of profound interest and a full report of symptoms, treatment and progress of disease helps other men mightily.

Since writing the preceding, we have come across the following: "Little (*British Medical Journal*) reports a series of cases in infants with rapidly fatal termination associated with hemorrhage into the supra-renal capsules. The lesions appear commonly—over trunk and lower extremities. They are first red, then dark-blue in hue, varying greatly in size." The above item appears in the last edition of Hyde & Montgomery, and we think has a direct bearing upon this case.

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 QUERY 5300.—"Embolism of Left Cerebral Artery." O. K. P., Virginia, asks for diagnosis, prognosis and treatment in a case described as follows: "Mr. G. N., farmer, age 62, weight 230 pounds, family history negative. Patient's history good except treatment about twelve months ago for aortic insufficiency with cardiac dilation. He was taken very suddenly with a spell of coughing and dyspnea about 11 p. m., March 18. His wife, getting out of bed, immediately discovered that he was completely paralyzed on the right side—leg and arm, also considerable tongue involvement. I reached the patient at 4 o'clock the next morning, finding him sitting on the side of his bed and on examination found this group of symptoms: partial hemiplegia, right side; labored breathing, full pulse, wild delirium, articulation defective. No pupillary or tongue symptoms visible. Present condition, April 1: Only slight weakness on affected side, but cannot read or add figures, either of which he could do well before this

seizure. His tongue is perfectly clear for short intervals and then he has trouble in speaking the words he desires to use. Appetite good, walks around, no pain anywhere. Urine highly acid, ps. gr., 1028, no albumin. Diagnosis: embolism middle cerebral, left side. Do we agree on this diagnosis?"

Unfortunately we are unable to speak positively from lack of a clear conception of physical conditions but feel inclined to agree with your diagnosis: embolism middle cerebral artery, left side. The prognosis must depend upon the condition of the man's vessels. If sclerosis is at all marked we may expect future and more severe trouble. We should be inclined to give this man salines, the "trinity" (aconitine, digitalin, and strychnine) morning, noon and night, with stillingin gr. 1-3, iridin gr. 1-3, xanthoxylin gr. 1-3 midway between meals to increase waste, adding probably, three granules of asparagin. Let him take this with half a pint of sour milk or buttermilk, then push arsenic iodide gr. 1-67 after each meal and at bedtime for two or three weeks to secure absorption. Elimination, renal, intestinal and dermal, are the main things; then we must positively secure equalized circulation and cardiac "tone." Salt sponge-baths followed by brisk friction will benefit the patient. His age of course is against him. Let us know how the case progresses and if at any time you feel disposed to make a thorough physical examination and report findings we shall be only too glad to suggest further.

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 QUERY 5301.—"Bromidrosis." G. A. T., Kentucky, wants something to "kill" the offensive odors of armpits and feet. Keep the parts clean with a good antiseptic soap, dry carefully and dust on some good absorbent and antiseptic powder, as the following: Boric acid, drs. 3; tannoform, drs. 3; powdered talcum, enough to make ozs. 3. Or try tannoform, drs. 3; salicylic acid, dr. 1; powdered talcum, to make ozs. 3. Go through this process once daily during hot weather. Formalin is a most useful remedy in these conditions: one dram of the 40-percent solution to the quart of water.





**PHENOL POISONING.**—D'Hotel has saved patients poisoned by phenol by washing out the stomach repeatedly.—*J. A. M. A.*

**VERATRINE IN ECLAMPSIA.**—Should eclampsia occur give veratrine by the mouth or hypodermically until the pulse comes down to 60 or 70.—Marrs, *Merck's Archives*.

**SCOPOLAMINE AND HYOSCINE.**—*Physicians Drug News*, for April, lists hyoscine hydrochloride, five grains, two dollars; scopolamine hydrobromide, five grains, one dollar and five cents.

**A TOBACCO "CURE."**—The inner bark of the tulip tree is said to render unpleasant, in some unexplained way, the taste of tobacco, in any form.—Henkel, *Maryland Medical Journal*.

**CATARRH.**—The subtle influence of aconitine upon the vasomotor nerves, is probably responsible for the restoration to healthy activity of the bronchial mucous cells.—C. M. Smith, *Merck's Archives*.

**DEATH FROM CHLOROFORM.**—A man died at Youngstown, Ohio, in a dentist's office. Chloroform had been administered, and the seventh tooth was about to be drawn, when he expired.—*Dental Digest*.

**EXPERIENCE IN ANESTHESIA.**—A writer in *The Lancet* says many instances have come to his knowledge where the want of special experience, in a self-constituted anesthetist has led to inconvenience and even disaster.

**CACTUS.**—If at any time there is a tendency to nervous hyperesthesia with an excitable action of the heart I have found cactus to aggravate the symptoms, and have advised against its use.—*Ellingwood's Therapeutist*.

**DEATH IN DENTIST'S CHAIR.**—In Omaha, Neb., a woman died in the dentist's chair. She had taken chloroform and two teeth had been extracted, when an acute spasm of the heart caused her death.—*Dental Digest*.

**CEREUS GRANDIFLORUS.**—This plant does well in this state, when carefully cultivated. A very valuable heart tonic, with the properties of digitalin. Culture well worthy a trial.—Quoted from C. R. Nichols, *Pacific Pharmacist*.

**A STRONG COMBINATION.**—*The Carolina and Charlotte Medical Journals* have wisely combined, and still more wisely have combined their editorial forces, thus retaining the full strength of both journals in the combination.

**ANESTHESIA.**—I cannot avoid the conclusion that no inconsiderable number of deaths attributed to post-operative shock, are instances of anesthetic deaths, due to a preoccupied operator and an ignorant or careless anesthetist.—John B. Roberts.

**ECLAMPSIA.**—In *Merck's Archives* for November, R. J. Smith contributes a valuable paper on "Eclampsia." In this he says the one drug which seems to be universally successful is veratrine. Enough was given to bring the pulse to 90 or below and keep it there.

**SUDDEN DEATH.**—In *The Lancet* of Feb. 22 Freyberger contributes an analysis of 74 cases of sudden death while under the influence of anesthetics. The same paper contains a discussion at the Society of Anesthetists, on Status Lymphaticus and its Relations to Anesthesia.

**CACTUS IN TYPHOID.**—Burnett says that in a case of typhoid fever, where he thought cactus indicated, he found that there was a rise of temperature each time after the remedy was given. He was inclined to think that the remedy induced this condition.—*Ellingwood's Therapeutist*.

**MEDICAL BIOGRAPHY.**—*The Medical Fortnightly* has opened a department of Medical Biography, conducted by Dr. W. B. Outten. The first instalment is very interesting even to those who are not personally acquainted with the gentlemen whose biographies are considered.

**SMOKING HABIT.**—It is claimed that the smoking habit may be cured by rinsing the mouth with a solution of silver nitrate 1-4 of 1 percent. This overcomes the desire for tobacco, because it causes a change in the sense of taste which renders the smoke repugnant.—*Medical Council*.

**ATOXYL FOR SYPHILIS.**—Experiments made in Germany seem to indicate that in atoxyl we have a remarkably effective remedy against syphilis; one that may possibly prove a rival to mercury, and be applicable in those exceptional cases in which mercury cannot be applied effectively.

**HEATING CHLOROFORM.**—Chloroform having been found to be almost entirely without danger in the tropics, Haun tried anesthesia with chloroform warmed to 102°F. He found the anesthesia better induced, with no bad effects, in eight cases.—*Critic and Guide*

**VISIT FROM A FLORIDA FRIEND.**—Dr. C. L. Randall of Altamonte Spring, Florida, but formerly of Irving Park, Chicago, was in the city recently and gave us a call, giving us some samples of the water of Tonywatha Spring, of which he is the owner. The Spring seems to be one of great promise.

**IPECACUANHA.**—SPRUE.—A recent writer says that in all cases of sprue he has recently given ipecacuanha with surprising benefit. He gives 20 grains a day for two, three or more days, stopping when the stools become thin, greenish and devoid of odor. He gives ample food, such as mutton, eggs, fruits, etc.

**TREATING THE MORPHINE HABIT.**—Haines substitutes half the daily dose with an equal quantity of dionin, gradually reducing the morphine and increasing the dionin, so that at the end of ten days dionin alone is given. This is then continued for three days and then gradually reduced.—*Merck's Archives*.

**CAN IT BE POSSIBLE?**—Referring to the institution of *The California State Medical Journal*, a writer in *The Pacific Medical Journal* says: "This journal was given origin through a resolution providing in effect for a journal on broad, scientific principles, dignified, courteous, ethical and unbiased."—Good Lord!

**ALKALINE BOTTLES.**—Gruedler has recently called attention to the danger of using bottles made of alkaline glass for alkaloidal solutions. All alkaloids are apt to be precipitated by the alkali in such glass. It is much better to keep the alkaloids in granules and only dissolve them when they are to be administered.

**STRYCHNINE IN COLLAPSE.**—Troisfontaines says that the reason strychnine does not succeed oftener in the treatment of cardiac collapse is because we do not give enough of it. He begins with 1-20 of a grain, which he does not hesitate to increase to 1-6 grain subcutaneously, repeating this several times in twenty-four hours.—*Merck's Archives*.

**HOW TO TAKE COLD.**—*The Toledo Medical and Surgical Reporter* for April contains an editorial entitled "How to Take Cold," which is alone worth a year's subscription, for its concentrated, cold common sense. If we were still in active practice, we should have that editorial reprinted and keep on our office table for our patients' benefit.

**SUBMISSION TO DICTATION.**—Medical men are called upon to exercise too wide a discretion in the course of their daily dealings with the world, to render it reasonable to expect them as a body to submit to dictation; and nothing could be more disastrous than the existence of a brief, that they speak and act under the guidance of some profes-

sional or irresponsible tribunal.—*Lancet*. We were not aware that *The Lancet* was so familiar with the state of matters in the American medical profession.

**ALBRIGHT'S OFFICE PRACTITIONER** had scarcely swallowed the *Electro-Therapeutist*, when we hear that *The International Journal of Therapy* has followed the same course and is now merged into Albright's journal. Like Drs. Chas. F. and J. J. Taylor, Dr. Albright has shown that even in Philadelphia a live man can make a new medical journal a success.

**DANGER FROM ETHER.**—To saturate a patient for an hour with ether, or possibly two hours at a time, is not without its own special risk, but these risks become considerably augmented when, as is often the case, these patients, still deeply anesthetized, are put back to bed upon their backs, with deep, moist breathing, insensitive cornea and dusky color.—Hewett, *Lancet*.

**VERATRUM VIRIDE.**—H. C. Wood, Jr., says that veratrum viride is not a vasodilator, the reduction in blood-pressure being due to slowing of the pulse-rate. The chief constituent, protoveratrine, is a heart stimulant. Thus the veratrum viride is a stimulant rather than sedative. If it does good in eclampsia it is by bleeding the patient into his own vessels.—*Medical Record*.

**CHLOROFORM.**—Certainly no one would be excusable if a fatality occurred from anesthetizing with cold chloroform in this climate, during the winter months, when he could so easily have doubled the value of his anesthetic, and increased the limits of safety, by simply placing the bottle in a vessel of hot water.—Gwathmey.—*New York State Journal of Medicine*.

**EPITHELIOMA.**—We have had the opportunity to see the good work Dr. Pusey of this city is doing in the treatment of epithelioma with the x-ray. The patient was a leading physician of Little Rock, Ark., with an epithelioma on the side of his nose. Dr. Pusey had applied the x-ray to this for some time, and the growth was pronounced cured at the time the patient visited our office.

**ABORTION CAUSED BY THE X-RAY.**—Fraenkel reports a case in which abortion was intentionally induced in a consumptive woman by subjecting her to 25 x-ray exposures, the ovaries and thyroid gland being exposed from five to ten minutes on successive days, adjoining regions being carefully protected. In three other patients exposure of the thyroid to the rays produced menstrual irregularity.—*American Journal of Surgery*.

**TUBERCULOSIS.**—Carroll Chase, discussing the treatment of pulmonary tuberculosis in *Merck's Archives*, says: "Intestinal antiseptics is important because of the much larger amount of nutriment that can be absorbed from intestines in fairly normal condition, compared with those where excessive fermentation or even putrefaction is taking place." For night sweats he prefers atropine, but if this tightens the cough unendurably he gives agaricin or picrotoxin, alone or together.

**REWARD OFFERED!**—It is a curious point that the human being we occasionally meet, whose regular habit it is to have an easy, quick stool twice a day, is certain to enjoy the best of health; whereas the constipated individual—well, we are all familiar with his pleasant disposition.—*Boston Medical and Surgical Journal*. (Five hundred dollars' reward to any person who will enable us to administer a pound can of saline laxative to Editor Simmons.)

**A VISIT TO JAVA.**—Even in the hurry and stress of our strenuous life, we simply have to take time to read Dr. Eccles' description of his visit to Java, in *The Medical Fortnightly* of April 10. What a delightful trip this of Eccles' has been. We owe him a debt of gratitude that he has not kept the pleasure to himself, but has permitted us to share it in his series of papers. Dr. Eccles is one of those men who, having eyes, uses them, and having a tongue, speaks of what he has seen.

**COCAINE AND MORPHINE.**—Lebord shows that a fatal dose of cocaine does not result in death when administered after the injection of morphine, but in severe cocaine poisoning, when the effects have been fully developed, morphine will not antidote. Atropine, chloral and chloroform decrease the intensity of the convulsions in cocaine poisoning; morphine stimulates or decreases them, being uncertain. Chloral combats the vasoconstrictor effects of cocaine but increases the toxic effect.

**LUMBAR ANESTHESIA.**—In *The Lancet* of March 21 there is an editorial discussing at length Lumbar Anesthesia. One significant sentence we transcribe: "For one thing appears quite certain, this, that good results cannot be obtained with this method of anesthesia except by those who have acquired considerable experience in the matter." This cuts out spinal anesthesia, as it does the volatile anesthetics, for use in the vast field of emergency practice, where the H-M-C has won its greatest laurels.

**A REORGANIZED STAFF.**—The editorial staff of *The Atlanta Journal-Record of Medicine* has been reorganized; and now includes E. G. Balingier as editor, with three associates and thirteen collaborators, from among the most prominent men of the profession in that city. Among these we note the name of Dr. Westmoreland, a name which has long been connected with the journal in the days of its success. We sincerely hope that the profession of the great State of Georgia will stand by the journal and make it worthy of their state.

**SCOPOLAMINE FOR CHOREA.**—Zelenski has recently suggested the application of scopolamine as a remedy for chorea. In cases of chorea major the incessant jactitation which wears out the patient and may even cause his death through lack of sleep, may be easily quieted by the hypodermic application of a very small dose of the H-M-C anesthetic. This seems to us preferable to drenching the patient with chloral, or giving him maximum doses of glonoin or amyl nitrite, each of which has been suggested, and praised. Zelenski presented a case at the *Société de Neurologie* of Paris, in which he ascribed his successful treatment to the use of scopolamine hydrobromide, 2-10 to

5-10 of a milligram daily, given subcutaneously. He remarked the quick subsidence of the choreic movements, and added that he had tried this remedy in four cases with uniform success. In one of these antipyrin, arsenic and chloral had failed.

**TEACHERS OF PEDIATRICS.**—The Association of American Teachers of Diseases of Children will hold its annual meeting in Chicago, June 1 next, at the Great Northern Hotel. Only teachers of this branch in medical colleges, or members of hospital or dispensary staffs engaged in this class of work, are eligible for membership. Dr. Samuel W. Kelley of Cleveland is the president of the association, while Dr. Robert A. Black of Chicago is secretary pro tem., replacing Dr. John C. Cook, deceased. An interesting program has been prepared.

**PNEUMONIA.**—In *The Canadian Journal of Medicine and Surgery*, Geo. M. Aylesworth contributes a thoughtful article on "The Mental or Nervous Hypothesis in Internal Medication"—Illustrated by the use of Aconite and Veratrum viride in Pneumonitis." Dr. Aylesworth's contention is that veratrum viride is indicated in sthenic, aconite in asthenic, forms of this disease, and that the two are never indicated together. The article is so good that we advise our readers to send for a copy of the journal containing it, and give the paper special attention. It is one of the most important papers on this topic we have ever perused. Dr. Aylesworth is a thinker; he never puts in print an article which is not deserving of this thoughtful attention we are now suggesting.

**GELSEMININE.**—Blair speaks of Merck's gelseminine as an antispasmodic and antineuralgic. It is a good physiologic antidote for strychnine poison. It has a selective action upon the central nerve system. By inhibiting nerve action it diminishes the supply of blood to the brain and spinal cord. It is a most valuable remedy for spinal crithism and cerebral congestion, gives good results in acute fevers of the sthenic type and may often take the place of aconitine. Headaches of the hyperemic type are benefited by gelseminine. It is an excellent nerve sedative under many conditions. Acute colds, ovarian neuralgia, uterine colic, facial neuralgia, lumbago, women's backaches, and functional heart affections are all benefited by gelseminine.—*Merck's Archives*.

**PLATFORM OF THE REFORMERS.**—(1) Independence of the individual physician; (2) Right of the states paramount; (3) The editor of the Journal to be its editor solely; (4) No long nor life-tenure for Trustees; (5) Lessening of centralization of power in Trustees; (6) Plain, intelligible, definite financial reports; (7) A chance for a committee of Reformers to examine the books; (8) Suppression of advertising in the Journal; (9) By elimination of advertising pages and other extraneous matter making the Journal more popular, increasing correspondingly its subscription, and (10) Reducing membership dues and subscription price; (11) Publication of names of cash beneficiaries; (12) Publication of names of cash-paid contributors; (13) Publicity of plans; (14) Abandonment of

manufacturing business; (15) Independence of every Reformer in the reform movement; (16) No officer or financial beneficiary shall belong to, speak or vote in the House of Delegates except that he may speak on request.—Editor *Pacific Medical Journal*.

We heartily concur in everything Dr. Coe has said and the second offered by Dr. Winslow Anderson. The Platform of the Reformers is ideal. Right will prevail in the end, but we do not care for the end to be too long in the dim distant future.—*Gaillard's Southern Med.*

**PRESCRIPTION DIFFICULTIES.**—In *The Western Druggist* F. M. Appel says that from a careful study of his own prescription file he has come to the conclusion, that an ever-increasing number of medical men are desirous of limiting the use of their prescription to the patients for whom they are written, and if possible, to the conditions existing at the time the patient was seen. There is not the slightest shadow of a doubt that Mr. Appel is perfectly correct. He seeks to meet the wishes of the physician in this respect by putting this sticker upon the compound: "Your physician directs that this prescription is not to be renewed without his consent." This is all right and very commendable.

**STRYCHNINE IN LARGE DOSES.**—Troisfontaines advises that strychnine be employed in much larger doses than are usually given. He gives from 1-12 to 1-6 grain hypodermatically as indicated, repeating up to a total amount of 3-10 to 6-10 grain in twenty-four hours. From such doses he has never seen untoward effects. He uses strychnine in diabetes mellitus, certain paralyses, sunstroke, psoriasis, pulmonary tuberculosis, surgical shock, acute and chronic alcoholism, collapse, and nervous depression which has occurred in infectious disease. In the last type he gives 1-2 to 3-10 grain daily for four to eight days, without toxic symptoms. The drug is not cumulative. In fixing dosage the patient's weight and condition of the liver and kidneys should be taken into account.

**CHOLECYSTITIS.**—In *The Alabama Medical Journal*, Robertson writes of cholecystitis and its medical treatment. His knowledge of the subject may be estimated by the fact that his only means of relieving the pain is a hypodermic of morphine, with perhaps a few whiffs of chloroform. He evidently has never heard of morphine and atropine even, much less of hyoscine, morphine and cactin. In the intervals he suggests the sulphate and phosphate of sodium. Olive oil and turpentine are now looked upon with little favor. Hot applications are suggested. He has never heard of succinate of sodium. The only thing he knows for the extreme itching is a dusting powder or soothing lotion. Pilocarpine has never been suggested to him, and yet he thinks he is writing upon the medicinal treatment of this disease!

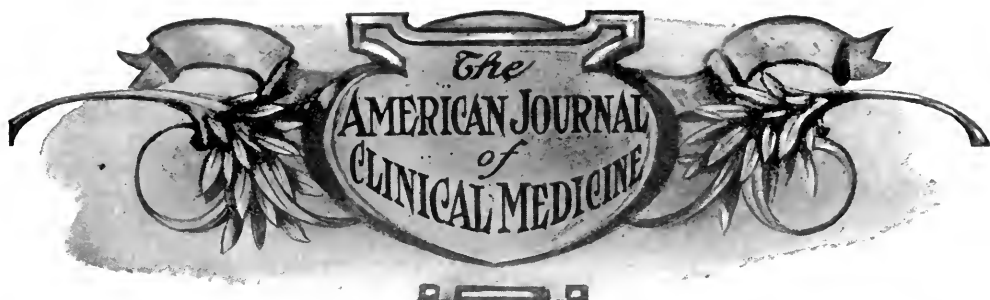
**FOLIA THERAPEUTICA.**—The fourth number of this quarterly is the finest that has yet appeared, and closes the year with a brilliant promise of usefulness. Every paper in this number is excellent, two of them so much so that we have made liberal abstracts from them which will appear in another department of this journal. We take this

publication as one of the most pronounced indications that has yet appeared, of the revival of interest in drug therapeutics; and that along the most desirable lines, leading the way to the scientific basis we have so ardently desired and advocated. We are gratified to learn that the reception of the journal by the medical profession has been such as to fully satisfy the expectations of the publisher. The medical public may be trusted; it is always willing to pay its money for value received.

**INTERSTATE DRUG BUSINESS.**—We learn from *ne Pacific Pharmacist* that the Secretary of Agriculture has decided that if a compounder, druggist, physician or their agents, by mail, express, freight or otherwise, should ship a package from one state to another, the label is required to bear the information called for by Congress; that is, as regards alcohol, opiates, cocaine, etc. If, however, the patient, a member of his household, or the physician himself, carries such a package across the State line and it is not subject to sale, such package need not be marked to conform with the law. This applies to drugs which are sent from one State to another for the treatment of drug addiction. If they contain morphine, they must so state upon the label, even although there may be an objection to allowing the patient to know that he is being thus swindled.

**THE PHARMACIST'S FUNCTION.**—In *The Northwestern Druggist*, Puckner says that the success of the pharmacist must depend on his ability of selling goods, etc., his skill in making pills, ointments, etc., and on his grasp of chemistry whereby he is able to discern and correct prescription incompatibilities, and aid and advise the physician in prescribing remedies and protect and instruct the public. As this comes from a prominent member of the Council on Chemistry and Pharmacy, it is just as well that the physician who prescribes and does not dispense should know exactly what he is up against. If this suits him there is nothing more to be said. Nevertheless, in the same issue, on another page, we learn that a druggist of Fairfax, S. Dak., died from an overdose of cocaine taken in mistake for codeine. We do not care to have that sort of druggists direct, advise or instruct us.

**SUPPORT YOUR LOCAL JOURNAL.**—We have repeatedly called the attention of our readers to the importance of supporting their local journal. No matter whether you like it or not, the profession of your city will be judged by your local journal. It should have your best support; not only in subscribing but in furnishing it your very best material. This matter comes back to us, on examining the October number of *The Journal-Record of Medicine*, of Atlanta, Ga. This number contains three valuable papers by Atlanta physicians, each of which is interesting to any physician, and each of which is a credit to the journal and the community. We desire especially to call attention to the paper on "Intelligence of Action," by Dr. Lindorm, one of the most thoughtful papers we have seen in any medical journal for years. We congratulate our Atlanta contemporary and trust it will long continue to represent so worthily the medical profession of its home state.



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## A TUNNEL THAT DOES NOT CONNECT

What is the practical relation between pathology and therapeutics? Does an exhaustive knowledge of the former really add to the physician's success? A question for our readers to answer

WE read the other day of an engineering feat that was more remarkable in the fact that it was not exceptional than as an evidence of the proficiency of our engineers. Starting on two sides of a great river, the tunnel was dug out under the river until the two parties of workers met, when it was found that only the merest fraction of an inch of difference existed.

We of the medical profession are not so fortunate. We have been working our tunnel from the two sides, but we have made the most lamentable failure in the way of forming a connection. We have studied diseases from two standpoints, the clinical and the pathologic.

The older physicians were exclusively clinicians; their studies were in the sick-room. They studied the patient, they noted the phenomena presenting themselves in the course of disease, made their deductions therefrom, made their therapeutic applications according to the theory of the case they there formed, and they met with a notable degree of success.

If you pinned them down to the pathology of the case, very frequently indeed they had to acknowledge that in fact they did not know what was the matter with the patient,

that is, from a pathologic basis. But they knew what was the matter with him clinically; they clearly saw certain departures from health, and they applied their therapeutic measures thereto with as much precision as the art of their time permitted.

The other end of the tunnel has been worked from the dissecting room. The pathologist has recognized certain departures from the normal conditions of the organs and tissues of the body. He has recognized these with his own eyes, as presented by the dead body of the patient. But here is the difficulty: Nothing in his studies has led him to any knowledge whatsoever as to the application of remedies. He will tell you very learnedly that he has found therein a certain morbid condition of the tissues of such and such an organ. But when you ask him what you are to do in a similar case, he shrugs his shoulders and says: "Nothing!" He knows nothing.

The honest physician has strenuously endeavored to bring the two ends of the tunnel together. He has striven with all his might to master the information contributed by the pathologist and to assimilate it; but the effort has not been very successful. In fact, we very much fear that the increase of knowledge on his part has led him in too

many instances into the same difficulty which the pathologist—exclusively—experienced, that is, an inability to apply the remedies. There is nothing in this study which teaches him to apply the remedies.

Here is a question which arouses a painful doubt: Does the study of pathology on the part of the clinician impair his previous ability to handle successfully his cases? Can he do as much for his patients after he has devoted himself to pathologic studies as he did before? On the face of it, one is prompted to answer stoutly to the effect that an increase of knowledge concerning disease cannot possibly be a detriment to the physician.

But just think a minute. The more profound the impression made by his pathologic studies upon the physician's mind the more is his previous conception of disease weakened. Unless he can assimilate the two branches of his knowledge, he will not approach his cases with such confidence as he felt before. He will not lay as much stress upon the clinical phenomena presenting. He will not make these clinical phenomena a ruling thought in his mind, on which the therapeutics is to be based, but the clinical picture will be to a greater or less extent obscured by the pathologic. In plain terms, he will be a less successful physician than before he knew so much.

This is taking ground which we expect will be instantly and warmly attacked. We expect to be held up to the derision of the multitude, as seeking to dissuade the physician from the acquisition of scientific proficiency, of endeavoring to turn him away from the light of perfect knowledge into the mist of uncertainty and superstition. But really, so many mean things have been said about us already that we are getting case-hardened. We expect as a matter of course to be the target for the most envenomed darts that malignity can prepare, and we'd just as soon give them something to shoot at, as suffer the chances of a flying shot in the darkness.

Perfect knowledge is as yet an unattained and unattainable ideal. Not one among us, even the most erudite, has anything like at-

tained perfection. It will be many a long year before any medical man is developed so far that he is perfect in the knowledge that is now scattered among hundreds of thousands of his colleagues. Get down from your high horse, and study not what ought to be, not what we would like there should be, but what actually is; and see if there is not some truth in the suggestion herein presented.

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Every man's life is a book, but occasionally I meet a man who reminds me of a book I got one Christmas. Upon opening it I found the insides to be a pack of playing cards.  
—Byron Williams.

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#### CASCARA: SOME OF ITS DISADVANTAGES

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The writer recently has had occasion to test a number of preparations of cascara in a case where it was desirable to increase the action of the large bowel. In this case there was a tendency to hemorrhoids dependent upon an enlarged liver. The patient had suffered from retention of feces, which accumulated without the patient's knowledge, until his attention was directed to the condition by an agonizing attack of abdominal pain. It required a week to empty the alimentary canal. Subsequently reaccumulation was prevented by the daily use of a saline laxative, and a weekly colonic flushing.

Desiring to find something else that would act specifically upon the large bowel, we obtained specimens of all the cascara preparations found on the market. In addition to these we experimented with pure cascarn, the glucoside, extracted, deprived of other extraneous matters, and made into tablets. Without exception every one of these preparations excited some abdominal pain and aggravated the previously quiescent hemorrhoids, until bloody discharges resulted. It was not found possible to prevent this untoward result by dividing or reducing the doses.

The study of the action of cascara in this case showed that, like aloin, it has a specific effect in irritating, not the colon alone, which is desired, but the rectum, which is not desired. In fact aloin produced exactly similar results when tried in the same case.

We have yet to recognize an agent which acts upon the colon exclusively, or even to a marked degree more than it acts upon the small intestines and upon the rectum. Such an agent would be exceedingly desirable could it be developed. We have not succeeded in establishing in our personal experiments any application of cascara which differs from the results obtainable from aloin, provided a pure aloin is employed and it is given in strictly physiologic doses.

The trouble with aloin is, that it is almost invariably given in too large doses. Cases are rare indeed in which 1-8 of a grain is desirable; 1-67 of a grain (one milligram) is more likely to be of value, and even smaller doses will often give better results than the large ones. These small doses may be repeated frequently if desired, and in this way a daily dose may be established; which may be divided for convenience into three or four parts instead of more.

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Full many a-man, both young and old,  
Has gone to his sarcophagus,  
By pouring water, icy cold,  
Adown his hot esophagus.

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### HOW TO "SPELL" SUCCESS

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Four elements go to spell the success of every human being. These are, speaking in commercial terms, merchandise, money, men and methods.

The man must have "the goods" to deliver. The doctor's goods are his professional knowledge, his skill in diagnosis and in treatment. No success worthy of the name can ever be obtained without merit. A man may make money, he may win popularity, he may do a whole lot of things and get a whole lot of desirable things, but as a physician he will never win success unless he has a solid basis of professional knowledge and skill upon which that success is to be founded. But professional knowledge and skill alone are not enough, he needs something more.

Money is a necessity for success. One of the finest physicians the writer ever knew, thirty years after graduation was still vegetating in a back street in an Eastern city,

with the utmost pains getting together each month barely enough to pay his house rent and family expenses. This man would have been an ornament to any circle of physicians had his true worth been known. He had no money. He borrowed three hundred dollars to complete his medical education, and in the thirty years following graduation he had never been able to pay off that debt. He was proficient as a physician, but he lacked money and method.

However skilful a man may be, it is the work of a lifetime to work himself up in the medical profession without money. There are very few human beings who are not impressed by the appearance of prosperity on the part of the physician, who would not willingly pay five or ten dollars for a visit from the elegantly dressed gentleman who speeds up to the door in his automobile, rather than pay one dollar to the shabbily attired man who walks his rounds.

The first essential for getting money is to make the man from whom you are getting it feel that you don't really need it.

The man himself counts for much. There be physicians whose aspect is depressive, whose fallen countenance and drawn-down lip-corners suggest to the patient the idea of a funeral. There are men toward whom one feels an instinctive sense of repulsion. There are others who impress one as light, frivolous, flippant, inattentive; and on the contrary, there is occasionally to be met the man to whom confidence and love go out as inevitably as the night follows day. The man may not be so proficient, he may be shabbily clad, he may not even use good grammar, but somehow there is that about him which inspires confidence and affection, and the patient relies upon him. It is not the man's knowledge. It is his individuality, which is pleasant, which is harmonious. The illiterate, the irregular practitioner has always this advantage in his favor—that the community feels that he is one of them and not an outsider.

The fourth essential is method. A man must be up-to-date. The best means he can supply himself for treating the sick are none too good. It is criminal in him to neglect

to avail himself of the latest improvements in medical science. No matter how good are his means, if there should arise better ones he must avail himself of them. Of all things he must keep himself from getting into ruts, from growing encrusted, from allowing his knowledge to crystallize so that further accretions are impossible. He must always be ready to try new ideas, even if they do not approve themselves to him. He must be humble in regard to his own knowledge and ever ready to admit that there may be knowledge beyond it. He must apply to every new idea the touch-stone of his own knowledge; he must emphatically try for himself and not take anybody else's word. In no other way can he really make the new knowledge his own. If he uses a remedy simply because somebody advises it, it is not his own, and he has made no real progress in his art until he has mastered the new remedy and can direct it intelligently from his own knowledge and not from that of another.

He must study the art of commending himself to his friends and patrons, not only understand his profession but make others see that he understands it. He must win the confidence of his community by deserving it. He has no more right to stand back to wait for people to discover him, than has any other man; and on him as on every other human being lies the obligation of pushing himself into that position for which he is fitted.

Too many really capable men, through a silly, childish, unwise modesty, retire into their offices, there to sit until people come and drag them out. In the name of heaven, why should people come to them! If you do know your business, how can you expect that everybody should know this, unless you give them a chance to find it out; and how can you do this except by going among the people, talking to them, consorting with them, letting them become acquainted with you, making them your friends?

Doctor, if you are not the success that you feel yourself qualified to be, sit down and ask yourself in which of these four requisites you are deficient. Take stock of your good

points and make much of them, while eliminating your sources of weakness.

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Enthusiasm is the yeast of progress. Carry a full supply and don't be afraid to mix it in everywhere—and spare a little to your neighbors.

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### A STUDY OF DIGITALIS

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It seems that the consideration of digitalis will never be ended. Nothing better illustrates the supreme importance of this great remedy than the constant succession of articles upon it which appear in the medical press. The last word will probably never be said.

In *The Boston Medical & Surgical Journal* for April 16 the special Paris correspondent devotes his letter entirely to this remedy. He says that in France the question as to the best preparation of the plant has been settled many years ago, namely the crystallizable digitalin of Nativelle, the principle that is soluble in chloroform.

This writer goes on to say that the trouble does not lie with the French but with the Germans. The great German chemical manufacturers come out every now and then with some new glucoside, which they claim to be the active principle of the plant, "more effective," "less toxic," etc. This, of course, arouses the fury of the French, who proceed to demonstrate that the new product is impure, its active part a glucoside already well known, and end with renewed eulogies for their own trusty digitalin, with its fixity of substance and certainty of action. Since this glucoside has stood the test of forty years' service it seems a fair chance that the French may be right.

He quotes an American textbook as saying: "Digitalis contains a number of substances, no single one of which acts as do preparations of the crude drug. In other words, all these compounds must act together to be therapeutically active." The writer then mentions the various glucosides and says: "None of these substances should be used in medicine to take the place of digitalis. The dose of digitalin, which ought not to be used as a substitute for



digitalis, is," etc.; and his apparent final choice of preparation lies between the fluid extract, which the French bar absolutely as unreliable, and the tincture, which no Frenchman really intending to get a therapeutic result would think of employing." He adds: "That is an instance of how the history of *materia medica* is written." "The French all use digitalin, the glucoside which is crystallizable and soluble in chloroform. This they use almost exclusively under the guidance of the great heart-men, and particular of Potain. A French physician in face of a serious case of *asystole* would never give the tincture."

"The French digitalis comes from the Vosges mountains. There is certainly the greatest difference in the action of digitalis according to where the plant is grown. The dose of this powdered digitalis leaf in France is from two to four centigrams. What, then, are we to think of such veterinary doses as 15 Grams in infusion (Edinburgh), 4 Grams ditto (London), or 10 to 12 (Roumania), unless the plant be altogether different?

The preparation of digitalis leaves is practically a fine art and requires as much delicacy as the tea industry, for instance. You do not simply stroll abroad in the fields, gather the foxglove, dry it and put it in a glass jar on the druggist's shelf. The influence of soil seems paramount in the question. The digitalis cultivated on the plains is useless. There is something about the geology of the Vosges that gives certain qualities to the plant that cannot be acquired elsewhere, just as the geology of Champagne, Burgundy and Gasconne creates the special qualities of the wines with which you are familiar. As some vintages are immeasurably superior to others, according to season (wet, dry, etc.), so is the digitalis plant of certain summers richer in therapeutic power than that of others. So that if we physicians were to content ourselves with using the raw plant as its galenic preparations, instead of its active and invariable glucoside, we ought in all logic to add, in prescribing, the district whose plant we prefer and the year of its growth.

"The question of altitude has also something to do with the difference between the digitalis of plain and mountain; the soil is probably not the whole thing. The high Alpine plants, small in stature, have a vividness of color and delicacy of aroma unknown elsewhere. This may be a provision of nature to ensure cross-fertilization; insects at those altitudes are scarce. The Alpine wild strawberry is a tiny, almost black fruit, so small that it takes a small boy a day to pick a dish of them; but its taste and perfume are so exquisite that the cultivated berry is simply nowhere in comparison. In addition to the constitution of the soil, the factors of moisture, rapidity of growth, great variations in temperature between night and day, and intense solar radiation, must enter into the problem of the differences between plants grown in the mountains and those from the plains.

"Again, Huchard found that even in the same region the value of the plant varies according to position, and particularly exposure. The parts of the digitalis used in medicine are the leaves, after removal of stem and ribs—leaves of the second-year's growth, chosen somewhat above the ground, shortly before the plant flowers, and gathered on a dry day. Even such a detail as the drying of these leaves has its importance. The leaves, which should be kept separate from each other, can be dried either in the sun, in the dark, in a drying oven, or in a vacuum with moderate heat. They are then powdered and kept in the dark in carefully stoppered yellow bottles. Moisture and light facilitate the action of an oxidizing ferment they contain, which destroys the digitalin so rapidly that in six months the tenor of the leaves in this substance is reduced by 50 percent, while at the end of a year it is reduced to almost nothing. This is why the druggists can never keep a large supply. It is easy to understand the disappointment apt to occur from the use of the powder of digitalis in maceration or infusion.

"With such a complicated natural history as this, and in view of the great care and delicacy required in gathering and preserving the plant, we are in a position to see why

such conflicting opinions have been published concerning its preparation and action; and it becomes clear that such preparations as the tincture, extract or macerate must vary constantly and enormously, not only in different towns, but in the different drug shops of a given town, and even according to the time of year at which the remedy is prescribed.

"The French claim that their digitalin is a perfectly well-defined, stable substance, always the same, giving excellent results and far preferable in every way to the galenic forms of digitalis. Even if other things were equal, the irritating and nauseating effect of the digitonin contained in preparations made with the plant itself would make the digitalin preferable; it is probably the action of this saponin that accounts for the diuretic effect of the macerate, through irritation of the renal epithelium.

"These details make it apparent that the French method of handling this drug in clinical medicine is a logical one and to be preferred in serious cases to all others."

Potain's prescription in heart-cases was as follows: "Rest in bed; a drastic purgative; absolute milk diet. Then, during one day, in one or two parts, fifty drops of the French Codex solution of digitalin in a moderate amount of water, after which the patient takes no more medicine for three weeks. The Codex solution referred to is 1 : 1000, the solvent being a mixture in certain proportions of alcohol, water and glycerin. Fifty drops are the exact equivalent of 1 milligram of their digitalin. The effect of this method in a well-chosen case is something as near to a miracle as we can work on this terrestrial sphere."

The author closes the article as follows: "With all the regard due to the eminent writer of the American textbook referred to, it will not do to tell a disciple of the much-regretted Potain that on no account should digitalin be used to replace the preparations of the plant itself; or that the only reliable and pure digitalin is a digitoxin (happy name!) prepared by a German firm. Why, then, does this firm mark in its catalogs, "digitoxin (crystall., chloroformic digitalin

of the French Codex)"? Such arch-heresies are enough to make the kindly old gentleman's bones writhe in his tomb."

Two most important considerations should be employed in estimating this production: It is scarcely reasonable to expect the French to welcome anything from Germany and to set aside their native product in favor of that coming across the Rhine; and especially is this true when their own digitalin has stood the test of forty years' actual use. In the next place, the writer probably does not understand that the unnamed American therapeutic writer of a textbook on "Pharmacology" was impelled by conditions peculiar to this country to "write down" the active-principle idea and uphold the galenics. As the author quoted happens to be a paid employee of a pharmaceutic firm, which is believed to be at the bottom of the fight against the active-principle movement in this country, the *onus* of his remarks needs no explanation.

Meanwhile it may be well to say that the last edition of Wood's "Therapeutics" quotes Beates's conclusions as to the value of the Germanic digitalin, saying: "If a representative of digitalis in small bulk be desired, probably the best preparation is Merck's German digitalin. This preparation has been deemed uncertain, but according to the clinical reports of Beates and the experiments of Arnold and Wood, this is because it has been given habitually in small dose." This is a good deal for Wood to say, much more than could have been expected by those who know him.

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#### PREPARE FOR SUMMER

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At this time of the year we usually suggest to our friends to overhaul their armamentaria in preparation for the summer season. We have strong convictions on the subject of dying. We don't want to die; not for many and many a year to come. In fact we are so in love with this world that we would gladly stay in it to the uttermost possibility.

While we strongly dislike to let any of our patients die, we must confess a predilection

in favor of saving the lives of the little ones. It grieves us to the heart to think that every year thousands and thousands of these little ones perish from the group of summer diseases which we strongly believe can in nearly every instance be cured. We are perfectly frank in the statement of our belief, that the means are at our disposal to save every one of the lives that are yearly sacrificed to cholera infantum and the other forms of summer intestinal disease.

For this reason we say now, before the heated season is upon us: Overhaul your means of coping with these diseases. It is hardly necessary to tell any reader of CLINICAL MEDICINE what are our views on this subject. But what are *your* views? Was your practice satisfactory last summer? You finished the season with a confession of failure, perhaps; and the determination that you would try a new method next year. If you do not think it over very seriously, and the remembrance of last year's failures is not still upon you, you will probably begin with calomel, chalk mixture, bismuth, and the other failures and have the same sad experience again—the easy cases get well, the bad ones die.

We should have a full discussion of the summer diseases in our July and August numbers. Let us have your experiences.

#### HYDRASTINE

Kehrer, after elaborate experiments, comes to the following conclusions: (1) Automatic contractions of uterine muscles are benefited by hydrastis and ergot, even though the uterine nerves are severed. (2) Extract of hydrastis has the least action of all of the hydrastis preparations, hydrastine and hydrastinine being much stronger. (3) Styptol and stypticin have a stronger action under the same circumstances. (4) Hydrastine, hydrastinine, styptol and stypticin have a susceptible action in dilution of one in two hundred thousand, and therefore have about the same value. (5) This action occurs in all stages of development of the uterine muscles, from birth through all stages of pregnancy. (6) Berberine has no action on

the uterus. (7) With intravenous, intramuscular or subcutaneous injection of these, the action is similar to that described. No sedation could be determined for any ergot preparation. (8) All these cause temporary cardiac depression followed by a moderate increase in blood-pressure, due to action directly on the blood-vessels. (9) Uterine muscular contraction follows the tendency of blood-vessel contraction. (10) The complete resemblance between ergot, hydrastis and cotarnine speaks against the use of the last two in hemorrhage during pregnancy.

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Too many gauge life merely as a span in which to "eat, drink and be merry for tomorrow ye die." They forget that life is eternal in the many, if brief in the individual, and that before the many has been placed a duty that demands a task well done. Be a true cog in the wheel of eternity! —Byron Williams.

#### UNPARDONABLE SINS

The general impression is, that there is one sin which is unpardonable. Try to realize the state of mind of the "unhappy individuals," ourselves if our critics are to be believed, who discover, too late, that there are *many* unpardonable sins, and that they individually and collectively or both have been guilty of all of them. In fact, there are so many that we are by no means certain that we can recall all of them, but here at least are a few:

1. We have opposed the growing tendency, supported by "authority," toward therapeutic nihilism and have urged the earnest scientific study of drugs with a view to their intelligent application in the treatment of disease. The sentiment of the just now dominant element in the politics of the American Medical Association being against this idea, we stand guilty.

2. We have opposed the indiscriminate application of surgical measures to all diseases where the slightest excuse for such intervention could be devised; mainly on the ground that there was "no medical treatment of such affections." Since surgery is the dominant element of the medical profession today, and our teachings are aimed directly at the surgical pocket, irritating and render-

ing hyperesthetic the financial nerve, we stand guilty.

3. We have, to a greater extent than all other interests combined, rendered it easy for the physician to obtain and dispense his own drugs without necessary recourse or subservience to the pharmacist. We believe in the doctor's right to dispense his own medicines if he wants to do so. We believe he should be privileged to prescribe or dispense as he wishes and that he is entitled to give what he chooses and thinks best for the case in hand. We believe that his money is as good as any man's money, therefore, that he is privileged to buy as the trade buys when he buys in equivalent quantities; and we believe in those who fearlessly and openly avow this commercial principle and act upon it. We have by our advocacy of the active principles made such inroads upon the older manufacturing chemistry and the machinery of pharmaceutic supply, as to bring down upon our devoted heads the bitter animosity of those people who very naturally object to seeing their millions of dollars' worth of costly machinery relegated to the scrap heap by reason of the unstayable evolution of common sense. Again we stand guilty.

4. By our uncompromising denunciation of pharmaceutic houses furnishing dope for quackery, by aid of which, while profiting the manufacturer, the quack is able to take the bread from the doctor's mouth, we have incurred the bitterest hostility of certain pharmaceutic houses who are reaping harvests of money from this trade, while at the same time they are posing, urged and supported, as the "only proper supply houses" of the medical profession. We despise those who, for the sake of standing in with and being a part of "the great scheme," deny that they do this, when all the while they are known to do it on the sly—known even to the bureaucracy, who hide their heads in the sands of denial so that they may not only not see this but be oblivious to the ever-present and incontrovertible evil of making of and furnishing "dope for quackery" in unlimited quantity, regardless of the good and welfare of the medical profession and totally ob-

livious to that of the poor people. We stand guilty.

5. We have uncompromisingly opposed whisky; especially urging upon the physician the fact that there are, in the resources of the active principles, means of meeting every emergency in practice which is met, though not so well, by the application of alcohol. In this we have dealt King Alcohol one of the worst blows that has yet been administered to him. This interest having a high hand in this type of pharmacy and controlling no small part of it, we have won its uncompromising hostility. Guilty? We surely are.

6. We have refused to bow our heads in meek and lowly self-abnegation, and to accept, unquestioningly, the dicta of certain "authorities," who are highly affronted at our refusal to admit their superiority and abjure our own beliefs.

7. We have insisted that physicians as physicians, and we as physicians, are better qualified to judge of the needs of other physicians than are ordinary pharmacutists, who, being entirely outside of the medical profession, cannot possibly have such an intimate knowledge of our needs. Guilty again.

8. While admitting the importance and value of laboratory methods, we have insisted that the clinician is also an observer, whose work is worthy of credence; and it is, in fact, essential to make even the laboratory conclusions of practical value. The laboratory men, who know nothing whatever of clinical medicine, and care less, naturally resent this as a rebellion against their authority, and here also we have been unfortunate enough to tread on some very tender corns. Rebellion? Guilty? If this be right, we glory in the treason of our thought and the sinfulness of our purpose to continue in our guilty ways.

As heinous as all this may be, we are fully conscious that these are only a part of our misdeeds; but surely the list is enough to condemn us in the eyes of all those whose interests we have interfered with, and they are a good many.

Still there are others; and as these others comprise nine-tenths of the mass of the medi-

cal profession today, and as these largely stand our self-constituted, untrammelled and openly avowed friends, we are content to rest our case in the hands of this just jury.

After all, with a powerful and influential section of the medical profession, our unpardonable sin has been that we have stood up for the rights, honors and privileges of the individual doctor. We have earnestly urged upon him the propriety of making himself a better doctor, of treating his own cases and doing his own work. We have strenuously urged that in nearly all cases there are really medical treatments for disease which he can apply himself; and that it is not his duty to rush off with his patient to the nearest surgeon or specialist. We have striven to arouse a spirit of independence among the rank and file of the profession, and in this we have emphatically opposed the selfish interests of men who have endeavored to convert the mass of the profession into a pack of jackals whose only function as physicians is the ignoble one of hunting up work for their leonine mastery.

Here is the head and front of our offending, and here is the reason for the animosity displayed against us by men who are not merely the tools of a powerful drug syndicate. This is why we have been singled out from all the profession in the United States as the special target for abuse. The ostensible points of attacks are trifles, not worthy of serious consideration beside the wrongs that others have perpetrated on the people and the medical profession, which could much better have been attacked by these people. The charges against us are only subterfuges, the real cause of the animosity displayed against us being as given above.

We have dared to say to the individual doctor, do your own work, and take into your own pockets the proceeds of it. If you do not feel yourself competent to do this work, make yourself competent. You are a man, free, white, and twenty-one. You are a member of the medical profession, you have all the rights and privileges that other members have. If you have not the intelligence to learn how to practise your profession, if you have not the nerve to practise

it when you do know how, you have made a mistake and would better get out.

For preaching this doctrine of self-respect and self-reliance to the masses of the medical profession of America we are, it would seem, to be hounded out of that profession and driven into outer darkness, where there is "weeping, wailing, and gnashing of teeth."

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There are no harder men to whip than those who don't know when they are licked.

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### COMPARATIVE POTENCY OF HYOSCINE AND SCOPOLAMINE

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At the section on Ophthalmology of the American Medical Association last June, Dr. Wendell Reber, of Philadelphia, presented a paper on the above topic, which has just been published in the *Association Journal* for April 25. Dr. Reber details a number of experiments with the two agents mentioned in the title of the paper. In these trials one drop of 1-10-percent solutions of the two were applied, the hyoscine solution in the right eye, the scopolamine in the left, of the same patient. The utmost pains were taken to eliminate all sources of uncertainty. The alkaloids were both from Merck; the solutions were prepared by one of the most reliable chemists of Philadelphia.

In these experiments it was found that hyoscine required an average time of thirty-five minutes to produce full pupillary dilation, while scopolamine required an average time of forty-seven minutes to produce the same results. The average time for the onset of full cycloplegia under hyoscine was fifty-nine minutes, while scopolamine required ninety-two minutes. "So that the relative pharmacodynamic power of hyoscine hydrobromide and scopolamine hydrobromide, used in ordinary office work, may be said to be somewhere close to 59 : 92. Or, to reduce it to the commoner form of statement, hyoscine in these tests showed itself approximately 50 percent more potent than scopolamine in producing cycloplegia for refraction work.

"So much for the academic phase of the matter, which seems to be rather at variance

with the claims that chemistry makes for these two drugs."

Correspondence is quoted with Merck & Co., in which they first suggested that there might have been a difference in the specific rotatory power of the two agents used, citing the fact to which we have frequently called attention, that there is much scopolamine of low optical rotation on the market, but in another letter Merck & Co. stated that the scopolamine and hyoscine furnished by them were both of the specific rotatory power of minus 20 degrees—and the hyoscine and scopolamine used in the test were both of Merck's manufacture.

The author goes on to say: "This leaves the matter precisely where it was in the beginning, namely, that with two drugs said to be absolutely identical as to clinical effect, pharmacodynamic power, molecular build and reaction with the polariscope, there should seem to be a more or less uniform difference in potency when tested by the delicate accommodation reaction." There remains as a possible explanation the parallel fact of chemical identity, but pharmacodynamic difference, as also in the case of caffeine and theine, and of cocaine and stovaine, which are said to be chemical isomers and yet exhibit a wide difference in their action. The familiar example of the kaleidoscope naturally occurs to one pondering such problems as these.

"It requires but a slight stretch of imagination to believe that some such similar principle may be operated among chemical isomers. That is to say, that although they may be of the same total molecular constitution, yet a different arrangement of the various molecules may result in difference of therapeutic effect or biologic reaction; just as one dozen dry or wet batteries produce currents of varying qualities according to the way in which they are connected, a fact utilized by electricians every day. Unless some such possible explanation as that just offered exists, there is no means of explaining the seeming difference in the reaction of the eye to hyoscine and scopolamine hydrobromide. In the last analysis it is always the

clinical phase of such studies that interests us most."

In the discussion which followed, Dr. Albert E. Bulson, Jr., of Fort Wayne, Ind., agreed with Dr. Reber that hyoscine was more effective than scopolamine as a cycloplegic. For four or five years he had used hyoscine almost exclusively as a cycloplegic and found it more reliable than homatropine and more evanescent than atropine. He said it was absurd to think that toxic effects would not occasionally occur, notwithstanding the utmost caution. But in an experience of several thousand cases in which hyoscine was employed he had never seen any alarming symptoms, though frequently he noted toxic effects which warranted careful observation of the patient for some hours afterward.

Dr. S. D. Risley, of Philadelphia, was particularly interested in the peculiar isometric properties of duboisine, homatropine, atropine and hyoscyamine. While chemically identical, they produced very different physiologic results, especially in the duration of the paralysis of accommodation.

The most incomprehensible thing about this paper is, however, that Geo. H. Simmons ever prevailed upon himself to allow its appearance in *The Journal* of the Association, since he and his accomplices have exhausted every effort to pour contumely on the head of Dr. Abbott because he insisted on supplying the profession with hyoscyne from hyoscyamus under its own name, instead of substituting under the same name an article which he believed to be inferior, although pharmaceutical authority was adduced to the contrary.

Had Dr. Abbott substituted the more easily and cheaply made scopolamine and sold it under the name of hyoscine, the charge of fraud made against him might have stood. We believe it does stand against firms who are doing that very thing. Under the circumstances we can only wonder at the astounding effrontery with which these people have dared to charge Dr. Abbott with wrong-doing, because he would not make this substitution. Well, "the mills of God grind slowly, but they grind exceedingly

small;" and we have at last from the source whence we have always claimed that the last word of the controversy must come—the clinical field—evidence to show that hyoscine from *hyoscyamus* and scopolamine from *scopola* are *not* identical in their action upon the human body.

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Tincture all your thoughts with kindness, all your ambitions with helpfulness, all your acts with determination, if you would make a lasting impression upon your world, be it big or little; but remember that the possession of these virtues, and all others, cannot save you from calumny if you insist upon doing your own thinking.

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### SPINAL IRRITATION (NEUROTOXIA)

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Twenty-five years ago the classification of diseases, like their consideration, was based upon clinical conceptions. This term was then used to designate a certain group of symptoms not conveniently arranged under any other head. Our classifications are now based on anatomic conditions, and there is no place in the nosology for spinal irritation. In fact the term has totally disappeared, so that even in the "Reference Handbook of the Medical Sciences" it does not appear. Unfortunately we have not as yet established such a connection between the pathologic-anatomic conception of diseases and their therapeutics. Hence, the more profound is the physician's study of pathology, the less he usually knows about the practical, clinical side of medicine.

There was a time when we recognized the clinical fact that there exist certain cases which present symptoms of irritability of the spinal centers. Some of these we found it convenient to arrange under either hyperemia or anemia of the spinal cord. Sometimes there was "scrofula" present, while in others there was the dyscrasia occasioned by syphilis, malaria, mercury or other of the then recognized causes of an impure blood-supply.

Then followed the time when most of the cases which had been called "spinal irritation" were grouped under the term "neurasthenia", and this was variably ascribed to overwork, sexual or other excess, and similar causes.

Nowadays we have learned to recognize as the primary cause underlying the vast majority of these phenomena, autotoxemia, generally due to absorption of toxic principles from retained and decomposing fecal matter in the large intestines.

Under the light of the present day we seem to have arrived close to the truth at last. It is not remarkable that the delicate, susceptible nervous tissues should especially respond to irritation of toxic matter brought in contact with the cellular structure, through the medium of the circulation; and this toxin exerting its influence upon all parts of the nervous structure, the effects will become manifest at the point of lowest resistance.

Hence, then, we are likely to have, as we do, a series of ill-defined, varying, unclassifiable phenomena, due in a general way to the irritation of the spinal tissues by these toxins, but not presenting a very closely similar picture in any two cases. We cannot say that these are myelites, and it is unlikely that any particular column of the cord should be attacked to the exclusion of the others. Possibly it may yet be demonstrated that the more serious degenerations of the spinal tissues are due to this cause and have their beginning in the anomalous phenomena we used to group under the term of spinal irritation.

Be this as it may, if is good practice, when such symptoms of spinal irritability are manifested, to begin by completely emptying and disinfecting the alimentary canal. If such obvious sources of toxins are present, such as suppurating foci about the uterus, ovaries or other pelvic tissues, or anywhere in the body, for that matter, it is imperative to remove these by the proper mechanical measures. When these indications have been attended to, we may then with propriety soothe the irritability by the use of the great spinal sedatives, cicutine, gelseminine and solanine, or other properly indicated remedies.

Our friend, Dr. Vogeler, suggests that the new view of the pathology of these cases might be expressed by substituting instead of the term "spinal irritation" that of

"neurotoxia." The suggestion is a good one, and we offer it the "family" for use or—criticism.

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Say not: The struggle naught availeth,  
The labor and the wounds are vain,  
The enemy faints not, nor faileth,  
And as things have been they remain.

If hopes were dupes, fears may be liars,  
It may be, in yon smoke concealed,  
Your comrades chase e'en now the flyers,  
And but for you possess the field.  
—Glough.

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### THE TRULY "SCIENTIFIC" DOCTOR

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To be a really and truly way-up scientist, it is necessary, in the first place, that the doctor should have spent sufficient time in Germany to learn thoroughly to despise his own country and all that emanates from it. When he has learned to feel that no serious consideration is to be given to any man who has not studied in Vienna, long enough to become saturated with the dogmatic pessimistic views and sentiment of that center of medical learning, he has taken the third degree. Thereafter, for the remainder of his life, there remains only the duty of asserting himself, and disseminating the principles he has imbibed with his beer and tobacco smoke.

Once in three years he may present a paper to some learned medical society, carefully avoiding in the choice of the subject anything which is of practical interest to anybody. In treating his subject, he must sedulously eschew everything of a useful nature, or else it would not be "pure science." Having secured a subject which nobody cares about, and written a paper upon it which is of no use to anybody, couched in terms a large proportion of which are unintelligible, he is comparatively safe from criticism and in an excellent position to throw stones at his neighbors.

In this he finds the serious occupation of his life. Having no ideas whatsoever of his own, he looks about for anybody who shows any trace of possessing one, and then he proceeds to punch holes into him. This is easy. Constructive work is slow, tedious, difficult and uncertain; so he takes the easier

part of a critic and chronic fault-finder. Having accomplished nothing of consequence himself, he naturally feels resentment against anybody else who has done anything, or even tried to do anything; and the more important the other man's work is, the more the critic's animosity is aroused against the person who does try to benefit his kind and his profession.

When a fellow wants to find fault it is easy: All he has to do is to look for a man who is trying to do something, and then hit him. It is so easy to demonstrate beyond a peradventure that the thing can't be done. The next thing is to show that it would not be of any use if it were done, and if a man goes ahead despite all discouragement and does it, then the correct thing is to come out and say that somebody else did it before him, that he was not the first.

It is needless to say that a man like this has no sense of humor. His idea of a joke is to hit somebody, to say something rude to a person. The greatest delectation possible to him is to find some perfectly unoffending person and go out of his way to find a chance to say or do something unkind and nasty to that person. It does not make a particle of difference that the person never offended him, or anybody else for that matter. All he thinks of is that he has an opportunity to get in a whack at a person, and if he thinks that he can do so and get away without being harmed himself, that is exactly the sort of a pudding he is looking for.

Some wise person says that any mule can kick; and it is true that there are a good many human mules.

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### THE ACTION OF THE VASOMOTORS

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In *The Medical Record* for April 25 there appeared two papers upon the vasomotors which are worthy of more than usual consideration. The first was by Dr. Geo. B. Wallace, the title being "The Physiologic Mechanism of Vasoconstriction and Vasodilation." Dr. Wallace says, were the arteries and veins of the body a system of rigid tubes, the pressure and amount of blood flowing through them would be de-



pendent entirely upon the heart. A change in the pressure and of blood-flow in any part of the system would be accompanied by a corresponding change in every other part.

Thus if a certain group of muscles in active contraction and relaxation were supplied with a needed increase in blood-supply, every other organ would receive a similar increase, whether they needed it or not. Obviously this would imply a necessary waste of energy on the part of the heart. That this condition does not exist is due to the circular muscular fibers of the vessel-walls, which exercise a certain force and are largely controlled in their contractions and relaxations by the vasomotor nerves.

These nerves, the vasoconstrictors and vasodilators, control the caliber not only of the arteries but of the capillaries and veins as well. Their chief effect, however, is exerted on the arteries and especially upon the arterioles.

Stimulation of the vasoconstrictors narrows the lumen of these vessels, increasing the resistance of the flow of blood, and a rise of pressure in the arteries is insured, that of the veins and capillaries lowered, while the tissues supplied by the affected arteries receive less blood and oxygen.

Stimulation of the vasodilators gives an opposite effect. Since this cannot be accomplished by muscular contraction, the vasodilators, like the vagus, must be purely inhibitory nerves.

The vasoconstrictors are chiefly in the medulla, passing down the cord and emerging with the anterior roots from the lowest cervical or first dorsal to the second or third lumbar, as preganglionic sympathetic fibers. These end in the ganglion-cells of the sympathetic plexuses, from which as postganglionic fibers they are distributed throughout the body. Besides effecting changes in the caliber of the vessels they maintain the tonus as well.

There are other additional vasoconstrictor centers in the cord, especially between the first dorsal and lower lumbar segments. These have less influence than the medullary centers in effecting changes in the caliber of the vessels, but exert as much in maintain-

ing their tonus. Some degree of tonus is also afforded by peripheral structures.

The sympathetic ganglion-cells play some part here, the chief effect coming from the vascular muscles or from the peculiar endings there. These are not exactly nerve-ends, but may be termed neuromuscular junctions. This seems to have been established by Dixon's experiments, which indicated the existence of some structure stimulated by adrenalin and paralyzed by apocodeine and relaxing differently from the muscles but not affected by degeneration of the nerves.

Dreyer's experiments indicate that the vasoconstrictor sympathetic nerves require for their proper function the presence of the adrenal secretion. The presence and amount of this secretion is dependent in part at least on impulses coming to the gland through the sympathetic system.

There is no very definite knowledge concerning centers for the vasodilator nerves. It is generally believed that these are located chiefly in the medulla, although reflex-centers seem to be present throughout the spinal cord. These nerves leave the central nervous system as preganglionic fibers, in part with the cerebral, in part with the posterior spinal nerves. They pass through the periphery usually in company with the constrictor fibers, although sometimes separately. The part most plentifully supplied with the vasomotor nerves is the splanchnic area, comprising vessels going to the spleen, liver, kidneys, and especially to the intestines. Owing to the immense area of arterioles and capillaries it contains, this region has most to do in effecting changes in the general blood-pressure and blood-distribution.

Whether the vessels of the brain, lungs and heart contain vasomotor nerves is still disputed. If present, they have little control over the vessels. This applies more to the constrictors than to the dilators. The circulation through the brain, however, is dependent largely on that of the splanchnic area. Constriction of the splanchnic results in dilation of the cerebral vessels, with a greater flow through the brain; dilation of the splanchnic has the contrary effect.

Brodie and Dixon have shown that vasoconstrictor nerves are not present in the pulmonary vessels. Adrenalin constricts all vessels supplied with vasoconstrictor nerves, and instead of constricting the pulmonary circulation, some dilation may be induced by this drug.

The general blood-pressure is usually governed by the constriction or dilation of the splanchnic area. Constriction here results in passive dilation, with an increased blood-supply in the brain, lungs and heart. The reverse is true when the splanchnic vessels are dilated. A local increase in blood-supply by vasodilation is the usual physiologic accompaniment to an increase in function.

May has shown that dilation of the pancreatic vessels occurs when this organ is in active function after the administration of secretin (duodenal extract). The dilation is not directly due to secretin, but to the formation of unknown metabolites, which being concentrated in this gland, affect the vessels there and nowhere else. So the renal vessels are dilated by urea, although this substance tends to raise the general pressure. When any organ is active, carbon dioxide appears in the blood in increased amount; probably by stimulating the vasomotor and cardiac centers the dilation of the vessels of the functioning organ is offset and the level of the blood-pressure kept constant or raised.

The vascular reflexes form another governing mechanism, one set being confined to the vascular system and a second comprising the impulses originating in other organs.

The chief afferent path over which cardiovascular reflexes travel is the depressor nerve. This arises in the beginning aorta. Its stimulation causes splanchnic dilation with fall in pressure, and this may come from an overfilled aorta. With normal aortic pressure the depressor nerve has no marked regulatory influence. Its controlling power on the blood-pressure is rather slight, especially when high pressure is due to increased irritability of the vasoconstrictor center.

Digitalin and strophanthin injected into intact animals cause constriction of the splanchnic and dilation of peripheral vessels

such as those of the hind limb. If the splanchnics are all tied off the injection of these drugs causes not a dilation but a constriction of the vessels of the hind leg. If an artificial circulation is established in the leg, so that it is connected to the rest of the body only by nerve, the injection of either of these drugs again causes constriction of the splanchnic and dilation of the leg-vessels. Hence the dilation must be an active one from a reflex starting in the splanchnic.

This reflex dilation takes in the vessels of the brain, skin and probably lungs and heart.

This reflex is of great importance as a protective mechanism, since a rise in general pressure from splanchnic narrowing may be partly or wholly offset by dilation of vessels elsewhere. It seems probable that the failure of many drugs to produce a rise in general blood-pressure when given to healthy animals or persons may be thus explained. The subcutaneous injection of strychnine, 1-20 grain, or caffeine, 2 grains, in a normal individual, may be followed by little if any rise in blood-pressure.

Many vascular reflexes originate in the brain. Emotional or psychic reflexes are very common. Whether they produce a rise or a fall in blood-pressure is dependent on its character and intensity. Undoubtedly they act through changes in the caliber of the splanchnic. They are usually of short duration. Stimulation of many sensory nerves results in rise of general pressure, and this again is due to splanchnic constriction and is generally accompanied by dilation of the peripheral vessels.

Cold may cause constriction of all the skin-vessels although applied to only a limited area. Heat causes the reverse effect. This reflex undoubtedly regulates the body-temperature. The splanchnic follows inversely the changes in the skin. Certain internal vascular regions, like that of the kidney, may be especially affected by skin-reflexes.

There is a somewhat definite sensory relationship between deep-lying organs and certain skin-areas, and counterirritants applied to such areas may affect the blood-supply to the related internal organs. These influences correlate one part of the vascular sys-

tem to other parts so that the physiologic condition is maintained. In abnormal states, however, the balance may be disturbed, as in neurasthenic individuals.

Fainting is usually attributed to abnormal psychic impulses which cause great splanchnic dilation and resulting cerebral anemia. In other nervous disorders the abnormal effects may be more localized. Angioneurotic edema is cited as an example.

By lessening the tension of carbon dioxide in the venous blood and the tissues, Henderson produced a condition in animals apparently identical to surgical shock. There was a pronounced fall in blood-pressure, an increase in the heart-rate, unconsciousness, and more or less loss of reflexes. As a result Henderson advanced the hypothesis that acapnia, or diminution of  $\text{CO}_2$ , is the cause of surgical shock. But the primary causes of the symptoms classed under this head may be so varied that the common results may be due to different abnormalities of function.

The article closes with these words: "It is self-evident that a better understanding of the abnormal conditions existing means a more intelligent line of treatment, and it is equally apparent that this better understanding must rest upon a sound knowledge of the physiological mechanism."

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Then gently scan your brother Man,  
Still gentler sister Woman;  
Though they may go a little wrong  
To step aside is human.

—Robert Burns.

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#### DEATHS DURING ANESTHESIA

Schultz writes to *The Lancet*, maintaining that a certain number of deaths from anesthetics are inevitable. In most cases the primary cause of death is the accident or disease, and only very remotely the anesthetic. There is no justification for the public becoming alarmed over the coroner's figures, when one compares the number of deaths with the enormous number of operations now performed. As the tendency to a fatal result is somewhat influenced by the mental attitude of the patient, Schultz appeals to the

lay press to keep sensational reports out of publication.

A writer in *The Texas State Medical Journal* figures out a high percentage of deaths from scopolamine-morphine by the highly original method of counting in eighteen deaths which occurred during operation under that anesthetic, but which the operator declares were not at all due to the anesthetic. But anything is allowable to make out a case against the new anesthetic.

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#### PERSONATION AT EXAMINATIONS

*The World*, of New York, for April 17, says that a person has been caught who was offering to supply Regents' certificates in Law, Dentistry or Medicine, for a consideration. A physician's certificate came high, at one thousand dollars. For this the advertiser agreed to go and stand the examination and present the party who paid the one thousand dollars with the certificate.

While this attempt was detected and the advertiser arrested, what is there to hinder anyone playing the same trick? A man applies for a regents' examination, passes the ordeal, and receives a certificate. Under that same name some other man, in some remote part of that state, goes to practise. What is there to show that this is the same man who passed the examination? Of course such a thing is unlawful, and if detected the man could be punished. But why should anyone imagine that such a fraud was being perpetrated, or under what circumstances other than accidental would the fraud be detected?

The next thing we shall have to have is a Bertillon examination made of every candidate; and this, with his photograph made part of the record which the man must register if he attempts to practise. In the meantime, perhaps the thumbprints will be sufficient identification. There will be no difficulty whatsoever in complying with this last suggestion. The man who is actually examined leaves his thumb prints, copies of these go with the record, and when he files his record where he locates, the thumb prints could be appended and compared. It

seems easy, and it certainly is advisable. The best safeguard now is the difficulty of finding men capable of passing the examinations—as obviously it would be difficult for any one man to present himself repeatedly.

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The first step to success is in "making good" with the little things that the many think of no importance.

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#### SMALLPOX—WHO TAKES IT?

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A recent circular from the Chicago Health Department tells us that an unvaccinated boy with smallpox visited three Evanston families; in each was present one unvaccinated member, all others having been vaccinated. These three unvaccinated members contracted smallpox; all vaccinated members of the three families failed to contract the disease, although equally exposed. The boy also visited a family on Armour Avenue, coming in contact with a considerable number of persons, among whom three had never been vaccinated. All others had been vaccinated. These three unvaccinated persons contracted smallpox. All the vaccinated escaped it. This boy visited a janitor's family on Thirty-third Street, also where there were two unvaccinated members. These two unvaccinated members contracted smallpox, the vaccinated members escaped it.

This is one more of the innumerable examples that prove the efficacy of vaccination. It is a sad commentary on the obtuseness of the human intellect that there should still exist a numerous and even influential anti-vaccination party. Basing their argument on the exceptional cases where vaccination fails or even works an injury they simply ignore the overwhelmingly predominant favorable testimony, and persist in peeping through a little crack when the broad window is at their disposal.

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#### GELSEMININE

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Every new opportunity which the writer has had for testing the efficacy of gelseminine as a means of alleviating the suffering caused by the withdrawal of habit-morphine con-

firms him in his view as to the efficacy of this medicament. First applying with fullest extent the principle of elimination to get rid of the toxins—released as the morphine is withdrawn—no single remedy or combination of remedies as yet tested compares with gelseminine in efficacy.

Up to the present this drug has not been given in greater doses than 1-50 grain hypodermatically every two to four hours. This has not occasioned drooping of the eyelids or other toxic manifestations, but it has proved sufficient to allay the nervousness and irritation in every instance. We can confidently recommend it to our brethren as worthy of trial.

Gelseminine seems to meet exactly the indication that has been most difficult to deal with heretofore. Patients say that they have not lost a night's sleep or a single meal, have no ache or pain, yet their suffering is indescribable. Much of this is due to autosuggestion, and is removable by plain, direct, common-sense statements, especially if given in the way of prognosis. But there remains a modicum which is undoubtedly due to the fact that the nerves, released from the benumbing influence of the opiate, take on excessive or hyperesthetic conditions. This is evident by the fact that the special senses become more acute than normal. This hyperesthesia is exactly relieved by the use of gelseminine, and under its influence the autosuggestive impressions are more easily dealt with. Again we say, this agent is worthy a trial.

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#### ATROPINE IN STRANGULATED HERNIA

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Tcherkesson draws attention to the utility of atropine injections in strangulated hernia. He uses two milligrams at a dose. Half an hour after the injection has been given an attempt at gentle taxis is made. The patient is put in the genupectoral position. A second injection is given if there is further difficulty. The author strongly urges that every strangulated hernia should be operated upon, even in cases where this method has been successful.



## MORALS AND MANNERS AS AFFECTING HEALTH

A study of some of the factors which are unfavorable to health and longevity, such as occupation, diet, habits, appetites and morals

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

THE general cultural class to which an individual belongs has a very considerable bearing upon his health and longevity. This is largely due to occupation, but the comparative statistics of different occupations present curious exceptions to what would be expected in mortality-rate, partly explained by relative differences in age. However, it may be said that a man engaged in a quiet, professional or business life has a mortality-rate of about 11 to 20, on an average about of 15; while manual labor involves a death-rate of about 20 per 1000, in any one year.

These differences are due, in large measure, to the relative exposure to causes of violent death. For example, while only about one death in 25 among the professional workers is due to violence (other than suicide) one in every 4.6 is due to violence among boatmen and canal-men, and one in every 2.6 among steam-railroad employees.

### *Factors Modifying Occupational Risks*

Barring certain strictly occupational risks, it should be remembered that the deaths by violence are more characteristic of an occupation than the general mortality which is obviously affected by average age and duration of employment. For example, clergymen have one of the highest total

occupational death-rates (23.5 : 1000) while steam-railroad employees have one of the lowest (10.8 : 1000) in spite of their liability to violent death in nearly 7 times as many cases. This and similar discrepancies are explained by the fact that clergymen enter on their life-work several years later and are nearly always classified as such at the time of their death, even if retired, whereas railroad men go into more quiet occupations later, especially after a disabling accident, and are not classified as of their original employment at the time of death unless still actively engaged in it. Generally speaking, excepting the highest and lowest occupations, most men change from one occupation to others, and even the ordinary course of promotion often changes the individual not only from one occupation to another but even from one census-class to an entirely different one, particularly from the laboring to the official class.

However, in an approximate degree we may say that for the total adult lifetime a man in a quiet professional or business occupation incurs, each year, a death-liability of about 16 to 20 per 1000, while for the coarser occupations, exclusive of those of extra hazard, it is 20 to 25 per 1000.

So far as death by violence is concerned (exclusive of suicide) the mortality ranges

from about 5 per 10,000 for the quieter, more "genteel," occupations to 40 or 50 per 10,000 for those involving obvious exposure to danger. Policemen, detectives, watchmen, soldiers and sailors (in time of peace) all have a rate of about 14 per 10,000. For laborers it is about 23.5 per 10,000, but this rate evidently is dependent to a large degree upon moral and mental factors, including indifference of employers, since butchers have a corresponding rate of 8; marble and stone cutters of 10; farmers and farm laborers of 8.4; blacksmiths of 10; iron and steel workers and machinists of 7.8; and masons of less than 16.

While not susceptible of proof by statistics, it is plain that a man of good morals and manners, who does not get drunk and who consorts naturally with persons similarly well behaved, thereby reduces his liability to death by violence at least to the average of the quieter occupations (about 5 : 10,000) and, indeed, to that of females (2.4 : 10,000) excepting for some risk due to differences in out-door life which can at least be compensated by habitual caution.

#### *Hatred a Factor in the Mortality-Rate*

Strictly moral points involve the slight total mortality by execution, homicide and suicide. The moral factor of envy is well illustrated by the fact that, up to date, just 10 percent of our presidents have been assassinated, whereas the average liability of males to death by homicide is only 1.5 in 100,000, and of females 0.6 : 100,000. Considering the probable risk of the class from which presidents are chosen, it is safe to say that our presidents have incurred at least ten thousand times the risk which they would have if they had remained in private life. In the aggregate every man who incurs, justly or unjustly, the hostility of his fellows, increases his probable mortality-rate, not only by tempting to violence, but to neglect in critical times of danger.

The average mortality by suicide is 15.1 for males and 4.8 for females per 100,000 of population. As, however, the rate for young children is very small, the average adult mortality is about 50 percent greater. The

contrast between the male and female mortality-rate seems to show that suicide is not, as commonly considered, strictly and mainly due to impulse, disgrace, etc., and, while there are very irregular fluctuations according to occupation, it appears that hardship and poverty pretty nearly balance the morbid tendencies of persons of better social class. Neither is there any significant fluctuation apparently corresponding to finer and coarser instincts, law-abiding tendencies and the opposite. The only occupations having a very low suicide-rate are those subject to great risk of death from violence, which may be interpreted to mean either that the constant subjection to danger (and hope of death?) satisfies the suicidal appetite or that when a suicide actually occurs, it is usually considered accidental death. Clergymen have a rather low suicide mortality, i. e., 8.5 : 100,000; physicians one of 23.6, which is about that of the remainder of the professional class. But it is well known that many suicides by physicians are glossed over and, to spare the moral stigma, we insult the late physician's knowledge of doses.

Occupations largely recruited from those who have seen better days or who have proved failures, as collectors, agents, boarding-house keepers (male), etc., have a suicide-rate of 35 to 45 : 100,000. The only occupation of any considerable aggregate population which has a notably high suicide-rate, not thus easily accounted for—and, indeed, its rate is far greater than those in which a plausible reason exists—is that of cigar makers and tobacco workers—66.5 : 100,000. In the absence of any economic and social factor especially operative in this group, it seems reasonable to assume that the physiologic effect of the tobacco itself and the hygienic conditions, which latter are no worse than for many occupations of low rate, are responsible.

#### *Some Moral Factors to be Considered*

Drunkenness, lack of self-control, even rashness are moral factors which involve their victims both as perpetrators and recipients of violence and accident. But they are also operative in the increased incidence

of many diseases, such as delirium tremens, pneumonia, hepatic sclerosis, renal degeneration, etc., for alcoholism especially, and of all in which chill, exposure, improper diet, ignoring of hygienic laws, disregard for danger of infection, etc., are factors.

Insanity seems often to be merely the culmination of habitual bad temper, emotional expression, etc., although it is fair to question how far such manifestations are controllable by one with a genuine tendency to insanity. Apoplexy is frequently precipitated by emotions, and a celebrated physician of advanced years declared that his life was at the mercy of any rascal who was disposed to irritate him. But the obvious moral is to practice self-control.

Veneral diseases are usually thought of first as those in which the moral factor is operative but, while this view is largely correct, it should not be forgotten that, as in the case of technical crimes, we have to do with impulsive as well as habitual criminals. Moreover, caution often outweighs the pathologic tendencies of immorality.

The inordinate gratification of appetites other than those connected with alcohol and venery also involves a predisposition to various forms of disease. Excessive use of tea, coffee and tobacco, gluttony, laziness, lack of cleanliness, improper attention to clothing, exercise, respiration, etc., are more or less closely connected with normal appetites and morality in the broad sense.

#### *The Responsibility of Dietetic Indiscretions*

It may seem far-fetched to consider dietetic indiscretions as violations of the code either of morals or manners, yet there is not so wide a difference as might appear between the man who drinks liquor short of the amount necessary to make him an immediate source of traumatic danger to himself or others, and the one who eats immoderately and thereby produces other forms of catabolic toxemia and of intestinal putrefaction or fermentation. It seems a fair comparison, both ethically and in the result, between the man who breaks his

neck on account of taking enough alcohol to make him unsteady on his feet, and the one who produces a fatal inflammation of the appendix or obstruction of the bowel by gross intemperance in eating.

While an exact statistic comparison is not possible, it is plain that that man has the lowest average liability to early death who is consistently clean, physically and morally, who controls both his appetites and his temper, who is careful of himself and considerate of others, who practises not only a negative virtue but who is cheerful and kindly and who aspires to the best environment.

It is even possible to attempt a quantitative estimate of the proportion of mortality which is preventable on moral grounds, under existing circumstances; including under moral grounds conscientious and intelligent exercise of sanitary and hygienic precaution, as in the avoidance of infection from tuberculous sputum, typhoid discharges, etc.

#### *Preventable Mortality in One Thousand Cases*

	Males	Females
General Infections (which cause 210 deaths in every 1000)		
Malaria (estimated as about one-half preventable).....	7.	7.
Typhoid (estimated as about two-thirds preventable).....	24.	24.
Cholera infantum (estimated as about one-half preventable).....	13.	13.
Smallpox (estimated as entirely preventable)...	4.	2.9
Veneral disease (estimated as entirely preventable).....	1.8	1.4
Various other infections (arbitrary assumption)	10.	10.
General Diseases "B" of Census (18.3 in every 1000)		
Alcoholism (estimated as entirely preventable)	4.5	0.9
Poisons (estimated as half preventable).....	2.	1.7
Inanition (estimated as half starvation since physiologic starvation is included under other terms).....	5.	5.
Tuberculosis (102 in every 1000 male deaths, 121 female).....	51.	60.
Diseases of Nervous System (117 in every 1000) estimated as due to syphilis, alcoholism, controllable emotions, etc.....	20.	20.
Diseases of Circulatory System (75.9 in every 1000) estimated as preventable on above grounds..	5.	5.
Pneumonia (110 male deaths, 101.8 female in every 1000) (male excess considered due to alcoholism, etc.).....	8.	.
Diseases of Digestive System (60.3 : 1000) (cancer mainly excluded)		
(Excess of male over female appendicitis)....	2.3	.
Excess of female over male peritonitis considered as mainly gonorrheic, abortional, etc.).....		4.5
(Estimated as due to gross dietetic errors)....	10.	10.
Diseases of Urinary Apparatus and Male Genitals (Excess of male over female bladder diseases)...	3.5	
Affections Connected with Pregnancy (Half of abortions considered as due to moral causes).....		0.6
Accidents and Injuries (81.9 male, 30.1 female deaths per 1000)		
Exposure and Neglect (considered as totally preventable).....	0.9	0.9

	Males	Females
(Half of excess of male over female drownings)	3.	
(Excess of male over female gun-shot wounds)	5.6	
Homicide considered totally preventable.....	2.9	0.6
(Railroad accidents considered as half preventable).....	6.	0.6
Suicide considered totally preventable.....	8.2	2.5
Unspecified Violent Deaths, including legal execution considered as half preventable.....	15.	5.
Total Preventable Deaths in every 1000.....	212.7	175.6

### *Violations of Morality*

At first thought it appears that the charge that over one-fifth of all male deaths and over one-sixth of all female deaths are due to violations of morality, even including gross carelessness, is an exaggeration or can be held as true only in a recondite sense. Such a charge is an exaggeration if we include only criminally punishable carelessness or if we do not assume an enlightened public conscience. The public neglect of drainage and mosquito extermination and the private neglect of netting to protect against malaria and a few other items may be conceded to be included under immorality only in a far-fetched sense. But only a few deaths in the thousand can be thus extenuated. For a physician, nurse or even layman of average intelligence, in view of the widely disseminated information on the subject, to allow typhoid discharges to enter water-supplies, and for municipal authorities, heads of institutions and families to permit the drinking of suspicious water without boiling is certainly as near homicide as the wilful exposure of nonimmunized individuals to conspicuously contagious exanthemata. Various other items may be defended on the same general argument. In the great majority of such instances there is no real ignorance of the danger, at least not after the case is in the hands of a physician; there is merely a failure to appreciate individual responsibility.

So far as venereal diseases are concerned, to say nothing of blindness, invalidism, fetal death and lack of fecundity, etc., the estimate made probably does not cover the actual, direct and indirect, mortality of human beings born alive. A considerable allowance has been made in the 25 preventable deaths among the 193 included under nervous and circulatory headings, but the 25 also include alcohol and other moral

causes. There is a considerable death-rate due to sequelæ of gonorrhea alone which would not seem to be accounted for in the 3.5 deaths per thousand from excess of male over female bladder troubles nor in the 4.5 deaths per 1000 from excess of female over male peritonitis. Certainly, to assert that only 6 deaths in 10,000 among females are due to moral factors in connection with abortion, including immoral pregnancy itself, criminal abortion and septic complications of innocent pregnancy and abortion but due to gonorrhea and syphilis, would seem explicable only by the falsification of death reports.

### *The Importance of Tuberculosis*

Almost all authorities hold that the great majority of cases of human tuberculosis are due to infection from previous human cases. The writer firmly believes that systematic isolation and sanitation would render tuberculosis a comparatively rare disease in a generation, especially if combined with the inspection of cattle and general supervision of sanitation of dwellings and public buildings already begun. But, without any such general, systematic attack upon this problem it is reasonable to assume that the incidence of the disease could be reduced 50 percent merely by ordinary care and decency in the care of discharges. It should be noted that this claim is not tantamount to saying that half the cases at present are due to neglect of disposal of sputum. Such a claim might perhaps be defended and, if shown to be true, there would be a 50 percent reduction in tuberculosis for each period of average duration of a case. In other words, barring what may be termed duplication of a source of infection in any given case, and exceptional susceptibility, the deaths from tuberculosis would be reduced to 1-2, 1-4, 1-8, 1-16, 1-32, and so on, of the present rate, in approximately 2, 4, 6, 8, 10 . . . years.

While it seems probable that, under any conceivable precautions, there would exist a specially susceptible fraction of the population which would keep the disease alive, it is not impossible that the disease might be practically exterminated. At any rate, such an event, with our present enlightenment,



appears no more impossible than the extermination of leprosy from Europe in the middle ages when there was no scientific and only the crudest empiric basis of sanitation. In referring to railroad mortality as half

preventable, we are well within the general consensus of popular opinion based on investigation of individual disasters. In general terms, the same applies to other violent deaths.

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## AN AMERICAN DOCTOR IN BOLIVIA

The difficulties of securing a license to practise medicine in Bolivia, with the author's personal experience. Also, his experience in the treatment of disease at very high altitudes

By CHARLES W. FOSTER, M. D., La Paz, Bolivia

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SEVERAL interesting accounts having appeared in *CLINICAL MEDICINE* from time to time in regard to life in the warm parts of the tropics, a few lines from one of the cold portions may not be without interest.

Last September I went into La Paz to take the examinations necessary to secure a Bolivian degree of Doctor of Medicine, without which a license to practise will not be given a foreign doctor, except to those from Peru, Ecuador, the Argentine Republic and Paraguay, with which countries Bolivia has treaties for the reciprocal recognition of professional degrees.

### *Medical Courses and Examinations*

The medical course here extends over seven years, although I doubt if there are more actual recitations than in a four years' course in the United States. In such studies as botany, zoology, physics, chemistry and histology the minutest details are memorized; but practically no laboratory work is done. The students scarcely ever look through a microscope or handle a test-tube. By serving as internes during a considerable part of the course they gain practical hospital experience.

The law governing examinations is changed almost every year. When I took them, there were three tribunals, one consisting of three druggists forming the Tribunal of Pharmacy, another of three physicians forming the Tribunal of Medicine, and

the other of three surgeons forming the Tribunal of Surgery. The Pharmacy Tribunal examines on botany, zoology, chemistry, physics, pharmacology, toxicology, etc. The Tribunal of Medicine has about thirteen subjects, and that of surgery about eight.

Each of these boards holds an oral theoretical examination that is supposed to last two hours. According to law the examinations must not be less than two days nor more than fifteen days apart. At the beginning of each scholastic year each professor has to prepare a "cuestionario," or program, covering all the topics in each subject he is to teach. These topics are numbered and one number is drawn by lot for the examination question on that subject for the annual examination and also for the final examination for degree at the end of the seven years' course.

After the theoretical come two practical examinations in the hospitals, one in medicine and one in surgery. In these it is necessary to diagnose two or more cases and prescribe the treatment necessary. Then a thesis must be printed and eight days' notice given before it is read. I enclose a copy of mine, and have to thank the articles appearing in *CLINICAL MEDICINE* during the last two years for the greater part of the material from which it is composed.

### *"Making Haste Slowly"*

After taking the first two examinations, I had to wait until the regular university ex-

aminations were over, and also some *fiestas*, before I could proceed. One tribunal had to be summoned nearly every day for a week before all three members could be gotten together at once. One would be absent one day, others on other. One would come on time, another three-quarters of an hour late, after the first had gone home, etc., etc. Other tribunals were almost as bad; so it took four months to accomplish what would be done in three days at home. After passing the examinations I have to wait six months for the diploma and license.

A doctor coming to this country with a good ordinary knowledge of Spanish and taking a reasonable time to review his studies and learn the technical language would be fortunate to secure his license to practise within a year or a year and a half from the date of his arrival. While waiting for the license and before settling down to regular practice, I am employed as physician for a camp of engineers that are running a survey for a railroad that is to unite the principal cities of Bolivia with the Argentine Republic, and which is expected some time to form part of the proposed Pan-American Railroad that will unite Buenos Ayres and New York.

#### *Medical Practice at a High Altitude*

The line near our camp runs along the top of the cordillera that forms the continental divide at an elevation of between 15,000 and 16,000 feet. There are no inhabitants near us, as few of the Indian villages are to be found above 14,000 feet, although the principal cities of the country have an elevation of from 12,000 to 13,000 feet. Some of the highest mines are at from 15,000 to 18,000 feet.

In midsummer here it frequently snows during the afternoons, but the snow does not stay long on the ground. It may freeze as much as half an inch of ice at night in the middle of summer. When the days are

bright it gets comfortably warm in the middle of the day, but as the summer is the wet season it is usually cloudy and cold. In the winter the sky is almost always cloudless, and the bright tropical sun shining into a wonderfully transparent atmosphere makes it comparatively warm, except in the shade, where it is always cold. At night the thermometer will go down to about zero.

In this rare atmosphere oxygen is so scarce that it is difficult to kindle a fire; in fact we only have about half as much as at the coast. Consequently pneumonia becomes the most dreaded disease, although it is not excessively frequent. The climate is generally healthful.

#### *Pneumonia Successfully Treated*

Even in the highlands of Bolivia pneumonia, if treated promptly and vigorously, is not hopeless. I rely largely on calomel and podophyllin for the bowels, to be followed by intestinal antiseptics; on strychnine, aconitine, and digitalin for the circulation; and locally the application of fomentations, as hot as can be borne without blistering the skin, for three-quarters of an hour or an hour three times a day. A cold sponge passed over the area every ten minutes during the application of the fomentations serves to intensify the effect. A lung-lobe apparently solid at the beginning of such a treatment will often be found to be permeable to air at its close. In the intervals between these treatments I apply camphorated oil liberally and a cotton jacket to the chest.

There is one doctor to three or four thousand inhabitants in the larger cities here; none in the smaller towns or country, except now and then one in the employ of some mining company or railroad company or of the municipality of some smaller city. The people generally would welcome foreign doctors, but foreign competition is not wanted by the profession.



# THE PRINCIPLES OF ALKALOIDAL MEDICATION

A restatement of the basic principles upon which the active-principle movement rests, principles which are of the utmost importance and whose recognition makes for a renaissance in medicine

By WALLACE G. ABBOTT, M. D., Chicago, Illinois

**A**LTHOUGH we have many times stated the principles upon which the use of the active principles in medicine is based, the constant accession to our numbers of thousands of new recruits compels a restatement of these facts from time to time. Our older readers will remember, that while these things are perfectly familiar to them, the younger men are not conversant with these facts and require to be told.

## *The Power of Superstitious Ignorance*

The use of the active principles in medicine, to the outsider, seems a comparatively trifling matter; simply the substitution of a rather better form of medication for the older ones. Numerous difficulties beset the beginner, especially if he has had some practice, but not much, in the older way. There is a certain degree of superstition in the way we look upon remedial agents which are not perfectly well known to us. Take the natural mineral waters: there is a certain attraction, a mysterious charm about that expression, which is totally lost when we come to consider a manufactured water. However, the natural mineral waters contain such constituents as happen to be in the strata through which that water passes before it reaches the source of exit; whereas the manufactured, or artificial, water contains exactly what ingredients we desire to have in it and in exactly the proportions we desire. Nevertheless physician and patient alike take the natural waters with a degree of satisfaction they do not experience in taking the artificial. The reason is, that the bases of their belief and practice are in superstition and not in knowledge.

The same holds good of the question of the materia medica. Ask any physician who has practised for a number of years, whether a

single active principle represents any of the cruder vegetable drugs. He will unhesitatingly reply that it does not; that when you use the crude vegetable you get "something more" in it than its main active principle. It is this "something more" we wish to discuss.

What is it?

Every vegetable drug contains certain "inert" parts, like cellulose, or woody fiber, gum, sugar, etc. None of these inactive ingredients are capable of exercising any known effect upon the human economy. In addition to these it contains one or more so-called active principles, that is, ingredients that do exercise a known effect upon the human economy.

Very many of the vegetable drugs contain tannic acid, which sometimes is desirable and useful, and which sometimes is not desirable. In most cases, where a more valuable active principle is present the tannic acid is injurious, as it hinders the solution, absorption and assimilation of the active principle and may prevent these altogether. Of the other active principles there may be one or more. If only one, that active principle represents practically all the useful therapeutic activity of the plant, as for instance arbutin, a precious medicament after it has been freed from the tannic acid which has enveloped it in the native plant. In other cases there are more than one, as for instance in hyoscyamus, which contains hyoscyne and hyoscyamine, two remedies synergistic over a portion of their field but antagonistic over other portions.

## *What is That "Something Else?"*

Now, we say, in every instance where there is "something else" besides the principal alkaloid in the plant, it is up to the chemist

to isolate that "something else" and give it to us, that we may try it, see what it is, what it will do; make such use of it as we find advisable. Deliver us from the realm of uncertainty and mystery, and let us come out into the broad daylight and know exactly where we are standing.

Take *nux vomica*, for instance; here we have strychnine, which practically gives us all of the values for which *nux vomica* is employed. But there is another alkaloid, *brucine*, in it. This has been isolated, also, and we have found certain qualities in *brucine* which strychnine does not possess. This renders *brucine* advisable for certain purposes in which it is better than strychnine. In others strychnine is the better. So that we have here, in using the active principles, the power of using strychnine when we want strychnine-effect, or selecting *brucine* when its special effect is more desirable, or putting the two together if we so choose. The matter here is entirely under our own control.

When we use the crude *nux vomica*, we are giving some strychnine, some *brucine*; and, in a general way, we get the effect which we are after. But we never know just how much strychnine or how much *brucine* is present in any sample; it is a matter of experiment, and the only way of ascertaining it is to "try" it on the patient. When we come to think of it, this method is closely analogous to that of the nurse who ascertains the temperature of the bath by putting the baby in. If the water was too hot the baby turned red, if too cold it turned blue."

#### *Certainty of Active-Principle Therapy*

The active-principle method has given us therefore separate agents of wonderful accuracy in the effects which they exert upon the human economy. We can tell what the effect is going to be with a certain dose of strychnine, *hyoscine*, *quinine*, *atropine*, *gelseminine*, *colchicine*, *aloin* with a degree of accuracy which is absolutely an impossibility with the older forms of drugs. We are therefore in possession, for the first time in the history of medicine, of a set of tools which can be depended upon

to do exactly the work we want to have them to do.

Having provided ourselves with these tools, having examined them, rendered ourselves familiar with the qualifications of each, and knowing precisely what each one will do under certain circumstances, we seek for an opportunity to put our new knowledge to work. We find this in the clinical field. We are called upon in the discharge of our duties to attend to the sick. We enter the sickroom and examine the patient, hear the history of the case, hear the complaints of the patient, and we determine to the best of our knowledge and belief what bodily functions are disordered. Our studies are of the living person. This study is illuminated by our previous investigations in physiology and pathology.

But these are only preparations; our science does not stop with these studies but begins with them. Our work, our actual work, is in the sickroom. It deals with the living and not with the dead. It does not even deal with the conditions which are exhibited on the postmortem table, these "ashes of a burned-out fire." We have to do with living subjects; we are called upon to treat disordered physiology, disease-processes in operation that are active and progressing. It is to these we are called to apply remedies, and not to the findings of the autopsy.

#### *Pathologic Engrossment Leads to Nihilism*

The basis of this work is shifted from that point by the pathologist. The man who is a pathologist alone is incapable of appreciating our work. He does not know the problems that are set before. There is nothing in his work to give him the slightest intimation of the means of meeting the difficulties whose sad results are before him. This is the reason that pathologic studies lead a man inevitably to therapeutic nihilism. There is nothing in these studies to which he can loop his therapeutics.

In point of fact, the modern skilful pathologist of the present day is not the equal in the sickroom of the old family physician of one hundred years ago, who

scarcely knew what the term "pathology" meant.

### *Bedside Study is the Thing*

We return to the methods of our ancestors in this, that we base our work upon our studies in the sickroom. Recognizing in the patient before us certain departures from the normal condition of function of his organs, we search in our arsenal of weapons for remedies which are capable of correcting this condition and restoring the normal function of the organ affected. Our success here will depend first upon our recognition of the exact diseased state, and our knowledge of remedies; which will enable us to recognize in the conditions presented by the patient the indications for a certain remedial measure which will be effective at the period of disease at which we are called upon to intervene. It is obvious that we can do nothing with a dead patient; just as it is certain that if that patient is dying so rapidly that death will supervene before the remedies for his condition have time to get in their work we are not going to save his life.

If we are not called upon until the disease has effected some material change in the anatomy of the affected part, our work will be tedious. It will then be that of checking the further progress of disease, of encouraging the elimination of the morbid products, and taking away the obstacles which interfere with nature in her efforts to restore the previous healthy condition of the part.

If we are fortunate to be called early, however, while the mischief is threatened but yet has not been accomplished, we are frequently able to put an end to the disease-process before that harm is done; and the patient is saved the tedious, uncertain process by which nature effects a cure. This we call jugulating disease.

Those who are accustomed to intervene promptly and effectively in the very beginning of acute disease are all believers in the possibility of jugulating or stopping its course. Those whose conceptions of the practice of medicine are based strictly upon pathologic findings, are just as emphatically opposed to the idea of the possibility of

jugulating. Both are right. The former can jugulate disease, the latter can not.

I am perfectly aware that a howl will probably go up over these words, but I cannot resist expressing my conviction that the study of pathology to a certain extent unfits a physician for the practice of his profession. The more his conceptions of disease are based upon pathologic findings, the more he is divorced from the clinical aspect. Pathologic studies are sterile; they lead to nothing. To the pathologist the patient is a "subject," to the clinician the patient is a suffering, ailing human being. The pathologist looks upon a "case" as spoiled if an autopsy does not complete the record; the clinician is grieved to the heart if his patient dies.

### *The Interest of the Patient Paramount*

The accuracy with which the effects of a single active principle are manifested, therefore, compels the practitioner to exhibit a like painstaking care in accurately estimating the departure from health in each case. He studies his patient with the most scrupulous care. He is not by any means disposed to limit himself to the naming of the disease. Naming the disease is a secondary matter and may be put completely out of sight. He learns early in his work that the remedies he is studying are not directed at the names of disease but rather at aberrations from health, and that one aberration from health may appear in an innumerable variety of diseases. No matter in which it may present itself, however, the remedy for it remains the same. We may find constipation present in a thousand different affections, nevertheless the indications remain the same throughout. This basing one's therapeutics upon clinical studies has immense advantages to the patient; it has some disadvantages also, for the physician, if he studies clinical symptoms too exclusively and neglects his pathology altogether, may fall into error. This, however, is not likely to be the case.

How about the causal indication? Much has been said about removing the cause of disease, but this is not always possible; besides that, the cause may already have subsided and the disease continues. It does not

necessarily imply that the removal of the cause of disease has anything to do with its cure. A man may be stabbed in the heart with a dagger, but the removal of the dagger does not cure the wound. We have the results to treat, after the cause is removed. Certainly nobody but an imbecile would think of continuing to treat symptoms while an active cause is still in operation, without any attempt to remove it. We are dealing here with real physicians who do not do such things.

*Study of Active Principles A Clinical School*

The study of the active principles is therefore a school for clinical study. It is a school for bedside instruction. The study is of the living subject and not of the dead. It is living anatomy, living physiology, living pathology, which we study. We see disease-processes during their active operation, not simply in their results. We learn to use our remedies, thrown into this swiftly passing blood current, and to judge with our own eyes of the effects which are manifested before us.

We are not seeking to belittle any of the allied branches of our profession. All that we are objecting to is the insistence on the part of our pathologic friends that their work is *all* there is to the practice of medicine, and that there is nothing in clinical observation and experience. Were this true, there would be no excuse for any physician demanding a fee from a patient. It is taking money on false pretenses for a man who does not be-

lieve in treatment to accept remuneration for taking charge of the case.

It is hopeless to endeavor to convince the pathologist of these truths. He takes his stand on a little barren rock in the sea; he will not look to the shore in sight. He will stay on that rock on which his feet are firmly planted, yes, he will stay there until he starves to death. He will urge us not to plunge into the sea and swim to the distant shore, for we may be drowned or there may be no shore there. We reply that there is no special reason in remaining on that barren rock, no good is to be accomplished, and death is certain if we stay there.

The advantages to the physician in a professional and business way commend this method. He is by it restored to his supremacy in the sickroom. None of his competitors can meet him here, for this is his own ground. His thorough study of the patient gives him a command of the case with which no prescribing druggist, no advertising quack, no Christian scientist can compete. Nothing ever gave the older physician such a hold upon his families as the conviction they were under that he "understood their constitution." The same principle, applied in a moderate degree, holds good here; and the physician is able to dominate his case, because he is worthy of it. He deserves to dominate it. He is a man who knows.

Our first object as physicians is to cure. A method which compels us to study more thoroughly our drugs and our patients can not be far wrong.

LITTLE do ye know your own Blessedness; for to travel hopefully is a better thing than to arrive, and the True Success is to labour.

—Robert Louis Stevenson

# THE ALKALOIDS IN THE GUATEMALA HIGHLANDS

The work of a medical missionary among the Quiche Indians, with a record of some very interesting experiences in practice among these strange and primitive people

By CARLOS F. SECORD, M. D., Chichicastenango, Guatemala, G. A.

LOOKING at evangelical missionary effort from the point of view of a mere civilizing work, it deserves the hearty sympathy of all educated people. But, for those whose faith is anchored in the infallible word of the Living God (the Holy Scriptures) it is a work whose results will only be fully known in the world to come.

Eight years of continuous service among the great aboriginal race of the highlands of Guatemala, and among the offspring of Spanish and Cuban "marriages," have given abundant proof that the Lord Jesus Christ is the same "yesterday, today and forever," and that He honors simple trust in His Word, be it ever so weak. As the Apostle Paul wrote in 2 Cor. 5:10, "As poor, yet making many rich, as having nothing and yet possessing all things," so we can, in part, apply the same word to ourselves.

## *The Work of the Medical Missionary*

There is no doubt but that the medical missionary has a great advantage, and the dense darkness of ignorance and superstition gives way to his persistent holding forth of the Word of Life, recommending the gospel to all men by more or less skill in treating the multiplicity of diseases which follow the utter disregard of nature's laws.

After the long period of brutal and demoniacal opposition with which the missionary is met, the work takes the impress of his character and the converts unconsciously participate of the same. When a practical, economical, consecrated, loving wife is united with him, as in my case, more than half the battle is won.

For a long time after the establishment of this mission we were without friends, the well hated us, the sick feared us, and it was

confidently stated that our object was to kill people and deliver their spirits to the devil. For a time no one would listen to us; no one would visit us. The roof of our rented home was partially destroyed several times, various attempts upon our lives were made, the government was petitioned to expel us from the district "because we en-



A Red-Pepper Merchant

deavored to change the customs of the people," and even the wizards were called upon to "bewitch" us. All efforts failed, and after a successful operation upon a hand transfixed by a skyrocket, confidence slowly took the place of fear, and today with a roomy mission station, composed of dispensary, chapel, etc., neither the town nor the state would desire us to leave.

Sun- and demon-worship is largely practised by the Quiches among whom we labor, and stone altars are numerous. The wizard-priests are greatly feared by the people and are our most determined opponents. The Indians are very industrious, and besides farming and sheep raising, weaving and almost all the useful trades are represented among them. The photographs which accompany this article were taken by an educated Quiche convert of this mission.



Giving the Hypodermic Anesthetic

Rum drinking is very prevalent, and as it is distilled from cane-sugar and wheat bran, it is cheap. The people are fast becoming demoralized by this vice and unless steps are taken by the government against it the country will suffer irreparable damage.

#### *The Home and Family*

We have two houses, three good dogs, cats, a parrot, a flower garden and various other things which enable us to live in a civilized way. My horse is also famous, as he rolled down a mountain side with me one day without damage to either of us. My glasses did not even fall off my nose. It is not every horse that can fall so favorably.

We have an earthquake or two from time to time, but in exchange have no blizzards nor cyclones, though we sometimes see frost

in December and January, during our "summer," or dry season.

My wife has taken three children to raise. One little girl was received semimoribund from malaria and dirt eating, her parents having died on a coffee plantation south of here. They are all quite useful to us, and, like the parrot, speaks English, Spanish and Quiche, though the first language is not being taught them.

Although the poet says, "'Tis music that tames the savage breast," etc., here the alkaloidal granules have tamed more enemies and made it possible for us to carry large quantities of active drugs from place to place; and as there are many distinct climates in this country, from cold to heat and from wet to dry, Abbott's energy has given us unalterable therapeutic agents under all conditions.

The medical work of this mission is quite extensive, and we are called upon to treat almost everything, even the belly-ache of their horses. The

natives have their own way of treating sickness, chiefly by taking a steam-bath in a small earthen oven by means of water poured over hot stones, and with a fire kindled in the small doorway. I make use of this custom in rheumatism by prescribing the vapor-bath with cold water and a good rub afterward.

#### *Treatment of the "Evil Eye"*

I was called one day to see a little child which had been unsuccessfully treated by a witch for the evil eye. Her treatment was to grease the little sufferer with oil and rue to dispel the evil influence. No self-respecting demon would long withstand the vile stench of the rue, but what the child really had was pneumonia. Buzzard soup is another favorite prescription of the ignorant,



and if that does not kill they cut a black chicken in twain and bind a piece on the sole of each foot. If, in spite of all this treatment the patient lives, the divining stone is

until the capsicum effect wears off, and afterward he politely asks about certain dishes before diving into their fiery contents. Experience is a great teacher. Tobacco and

quicklime are chewed by the Indians of certain towns, the lime being rolled into a piece of tobacco and then masticated. Bladder diseases abound among those addicted to this vice.

*The "Green" Apomorphine  
Tablets Used in  
Poisoning*

The little "green" apomorphine tablets some are so afraid of give but good results in my own hands. I was riding along one day to a town several days' journey from here

and stopped for coffee at an Indian hut by the road. An old Indian and his wife were drinking rum mixed with coffee, but



Fallen Idols

consulted as to what other "remedies" shall be exhibited. If the sufferer dies, the family and friends get drunk as a religious duty in the full consciousness of having done their utmost.

A favorite prescription for children who do not learn to talk quickly is for the father to purchase a small bread, present it to some parrot, gather the crumbs with great care and give them to the child to eat!

On the other hand, if these people do not know much about sickness, they have a certain knowledge of plants, and I know a young man who for years has been a maniac, made so by drinking a decoction of some plant. Snake-bites are also cured by chewing and by application to the wound of certain parasitic plants, bruised.

According to the district are the customs of the people, but chilies, that is, red peppers, are universally eaten. Some families use several pounds a week. When a "green" foreigner takes a mouthful of some tempting dish there is weeping and gnashing of teeth



A Broken Shoulder

I missed a bottle of tincture of iodine I was carrying, and upon investigating the stains on their lips it was evident they had drank the iodine. A little green centigram-tablet of apomorphine in the arm of each one

caused the ancient couple to roll in the grass and brought up everything they had inside. A little starch water afterward fixed them up all right. Another case was that of a girl who swallowed about 0.15 Gram of sulphate of strychnine in meat prepared for dogs. The severe convulsions ceased soon after the hypodermic of apomorphine and recovery was speedy. I have also used injections of pilocarpine, with good success, in



An Ancestor of the Darwinites—Eaten by the Doctor and His Party

strychnine poisoning. Another case was that of a woman who tried to swallow a piece of meat without chewing—

It lodged in her gullet  
And she couldn't pull-it,  
Nor could she poke it down;  
But a little green granule  
Made her mouth full  
Of the beef she had not chawn.

(With profuse [imperative!] apologies to the "poets" of the CLINICAL MEDICINE "family.")

Still another case where apomorphine was brilliantly successful was in an attack of convulsions brought on by a fit of anger.

To cure the nail-biting habit in a little girl I injected a drop of a solution of quassin in the point of each finger, with instructions not to wash her hands for a week. It was "dose enough."

#### *Using the Anesthetic Tablets*

The hyoscine-morphine-cactin tablets are used almost daily in our work. A physician from a neighboring state, who witnessed their use in an operation on a weak woman, was greatly surprised at their action, though he thought her long sleep afterward was a sign of collapse. However, when she awoke free from pain and discomfort, with no recollection of the ordeal, he was anxious for me to give him a supply of tablets, which I did.

Another most interesting case was that of a weak old woman with dementia. When I visited her she had not opened her mouth for fifteen days to take food or water, and for five days and nights had been violent. A whole tablet of the hyoscine-morphine combination gave her a thirteen hours' sleep. The next day I repeated the dose, with the same good results. The acute mania did not return, but she lapsed into a condition of passive dementia, utterly refusing to open her mouth. For several days I gave her food by the rectum, and strychnine, nuclein and duboisine hypodermically during the day-time, and a half tablet of hyoscine-morphine-cactin at night. Tiring of so much work and noting a great improvement in her general health I told her I should put the tube down her throat if she would not take the food and medicine voluntarily. She was not from Missouri, but I had to show her, so inserting one of Dr. Sourwine's rectal dilators between her teeth I introduced the tube and threw a mixture of milk and eggs directly into the stomach. Once was enough, and as she consented now to use her mouth for what it had been made for, she made a perfect recovery under the use of the strychnine and phosphorus compound granule, nuclein, and a generous diet.

#### *A Desperate Case of Pleurisy*

In a desperate case of pleurisy contracted by an old man while sleeping in

the open air to care for a pile of corn, I used centigram-doses of aspidospermine hypodermically for dyspnea; hyoscine, morphine and cactin for insomnia and pain, hypodermics of nuclein; apocynin, bryonin, the defervescent compound, and arsenic iodide. When asked the name of his sickness my answer was, "avaricia chronica"—chronic avarice.

Two cases of epileptic fits, a man and a woman, were cured by large doses of podophyllin, calomel and salts, followed by two Grams of thymol in divided doses during the day.

During the epidemic of typhus only three, who would not obey my instructions, died. Purgatives of epsom salt every two days, and 2-drop doses of creolin every two hours was the prescription, on account of its cheapness.

As Mark Twain wisely said, if he were to practise medicine he would begin with a barrel of salts. We have caused the sale of magnesium sulphate, in this town alone, to increase from a few pounds a year, before our arrival, to 300 pounds a year—and still on the increase. For personal use and for certain patients we prescribe the effervescent salt, but the great mass get plain "salts."

#### *Some Enormous Goiters Cured*

We have cured some enormous goiters. They are known by the "classic" name of gaguechos (pronounced way-way-chos). Some are round while others are so long that their owners carry them inside their shirts. The form of these common articles of dress

(the goiter) depends upon the style of the town where they grow. Iodine externally, with epsom salt and iodine internally, causes them to shrivel away, and at times the only remaining sign of their former residence consists in the wrinkled skin.

Among the photographs sent you is one of a female monkey, killed and eaten by myself and companions during an evangelistic and botanic trip to the hot country north of here. If CLINICAL MEDICINE has any of Darwin's disciples among its readers I must here condole with them for their great loss, for we made several good stews of one of their relatives. Monkey meat is very appetizing, if someone else kills the animal, but as it jumps from tree to tree with great rapidity, the hunter must aim quick and true to bring one down. At one point on the great Chajul river, near the Mexican line, monkeys are so numerous that one band consumed an hour in passing a certain point.

Among the other photographs sent will be seen the examination of a broken shoulder, which was covered with rags and pine pitch, and the giving of a hypodermic of hyoscine, morphine and cactin preparatory to setting same; an Indian with his incense pot and fire, worshiping according to ancient custom, at daybreak; a young Indian boy standing beside fallen idols, which is a vivid representation of the power of the gospel; one of the meat markets of the town, the meat hanging outside and the view almost ruined by the clouds of dust for which the month of March is famous here.

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#### A PREACHMENT

**B**E kind; it makes your life like a June day, attracts friends and confounds enemies.

Be just; you never can tell how soon the fellow to whom you are unjust will have the screws on you.

Be joyous; there is but one life to live and to miss having had any gratification out of it is a calamity, indeed.

Be true; then you may expect others to be true to you.

Be sincere; others noting your sincerity will give their confidences and be likewise sincere with you.

Be thoughtful; the iron enters the soul in after life when we have been neglectful of those who loved us.

—Byron Williams

# CIRCULATORY DISEASE, APHASIA, PARALYSIS

The relation between some cases of the latter conditions and the former, with the description of an instrument for the measurement of blood-pressure, and an outline of treatment

By LOUIS FAUGERES BISHOP, M. D., New York City

Professor of Heart and Circulatory Diseases, Fordham University School of Medicine;  
Physician to Lincoln Hospital, etc.

IT IS a pity that the rather crude conception is prevalent that an attack of apoplexy and its resulting damage to the brain is a local affair, involving sclerosis of a single artery and its final rupture. This is undoubtedly true in a few cases where there is a localized sclerosis that gives way, but even this sclerosis is probably the result of a preexisting tension.

A much truer and more satisfactory conception of apoplexy is that it is a local failure of the mechanism of the circulation, secondary to a general disorder of the whole circulation.

Every machine, when overtaxed, gives out in some particular point and does not go entirely to pieces in every direction at once. The part that is most under strain is the part that gives out. In the human machine strain very often leads to inflammation, so we find not a few cases of paralysis due to inflammation of a blood-vessel, leading to thrombosis, and that there is no rupture at all. This is particularly true in those cases which are the result of prolonged nervous strain and which occur at a time of mental overwork. The patient who develops apoplexy as the result of overeating and drinking and who has a sluggish brain is more prone to be the subject of a ruptured blood-vessel.

## *Circulatory Disease and Paralysis*

The relation between circulatory disease and paralysis is as follows:

The individual working for a long time under a strain of some occupation, which exceeds his normal capacity of mental work, develops a chronic exaggeration of

that influence which is designed to maintain a suitable tone in the circulatory apparatus. As a result of this there is a contraction of the peripheral circulation so that in order to circulate the blood properly the heart must work harder and maintain an exaggerated blood-pressure. The heart becomes hypertrophied and finally degenerated so that there is an irregularity of the circulation. During this time there have probably developed local changes in the blood-vessels due to strain. Now at some particular time the demands upon the brain lead to a vascular irritation that results in inflammation. This with the irregular circulation predisposes to thrombosis.

When thrombosis occurs, the part of the brain involved, which is very likely to be the part of the brain that has been actively called upon, is deprived of its blood-supply and there results at least a temporary loss of function. In this type of cases the left side of the brain, which is the seat of the intellect, is most often involved, and we have aphasia and paralysis of the right arm and leg.

This view of the development of paralysis explains what has often seemed mysterious, namely, the relatively frequent involvement of those parts of the brain which are the seat of volition and the intellectual faculties. Considering the bulk of the brain, lesions in other locations are surprisingly few.

## *High Blood-Pressure and How to Measure It*

Almost all cases of acute blood-vessel damage are preceded by high blood-pressure, and this should be a matter of constant observation by those who attempt to study these subjects. I now use an instrument

of my own devising that has freed estimation of blood-pressure of all its complications, so that with this machine hanging over my desk I can measure the systolic blood-pressure in less time than is needed to take a temperature.

The simplified instrument consists essentially of a red armlet, 15 cm. wide and 4 cm. long, made of strong material. This armlet, or cuff, differs from the Rivi-Rocci armlet in its greater width and in the fact that



Dr. J. Bishop's Blood-Pressure Apparatus

the rubber bag occupies only a part instead of the whole armlet. The advantage of this latter arrangement is that the rubber bag, when expanded, compresses the artery against the bone rather than to surround the whole arm, which method proved to be painful. Connected with the cuff is a red rubber tube 203 centimeters long. To this

is connected a white tube, 60 centimeters long, and to this a blue tube and a blue bag measuring to the center of the bag 136 centimeters. Connected to the blue bag is a cord passing through a pulley of special construction.

This pulley is so constructed that it can easily be hung at a height by means of a cane or similar implement. I have also devised a special scale which is attached to the bag at the level of its contents and which is used to measure the height of the bag above the patient's heart as hereinafter described. The instrument can be rolled up and carried in the pocket and is used as follows:

#### *How the Instrument is Used*

The tube is separated at one of the connections between the different-colored tubes and the air is drawn out of the two bags by suction by placing the ends of the tubes, one at a time, in the mouth. The bags are now placed on the floor and the ends of the tubes plunged in a basin of water and about 14 ounces allowed to syphon into the bags. The ends of the tubes are now rejoined under water so that no air can enter. The red cuff is now lifted up so that all the water runs into the blue bag, which is left on the floor. Then the armlet is placed around the arm of the patient in such a manner that the part containing the bag comes on the inside of the arm. The pulley with the cord through it is now attached high up to a picture molding or some other convenient object, and the bag is hoisted slowly until the pressure of water that flows back to the cuff has compressed the brachial artery and obliterated the pulse at the wrist.

To find the exact point at which this takes place, it is better to lower the bag until the pulse is distinctly felt again, and then raise it, two inches at a time, counting ten beats of the pulse each time until the pulse disappears. If at this point the white tube is opposite the level of the patient's heart, or the level of the cuff, which is practically the same, having the patient in a sitting position, the patient's blood-pressure is

within normal limits. If the blue tube is opposite this level, the patient has a sub-normal blood-pressure; if the red tube, the patient has an increased blood-pressure.

In order to measure the blood-pressure in terms of millimeters of mercury, my special scale is attached to the blue bag at the level of the water in it, when the apparatus is in operation, and the figure on the scale at the level of the heart when the pulse disappeared indicates the blood-pressure in millimeters of mercury.

I have tested this apparatus with all kinds of cases and compared them with the standard instruments and found that its readings were correct. I find that a closer reading is possible with this instrument than with the other instruments on account of the absence of fluctuations and the greater length of the scale. This is particularly true in low-pressure cases. The instrument is particularly convenient for detecting the cases of blood-pressure that fall into my classification of blood-pressure cases, into primary low-pressure cases, high-pressure cases, and secondary low-pressure cases. It can be used with accuracy up to 325 or more millimeters, which is usually impossible with the air-mercury machines. In these unusual cases, by using the instrument where there is a stairway or in a very high-ceilinged apartment, the necessary elevation of the pulley is obtained. (The accompanying illustration, page 775, shows the instrument in use.)

#### *The Indications for Treatment*

Indications for treatment are found in the history of development of disease and the nature of the local accident. In a case in which the aphasia is not very marked and the paralysis only slight, a great deal can often be accomplished.

Iodide of sodium properly administered has an almost specific influence in improving the local condition. It should be persisted in from the beginning. The general circulation must be regulated in the first place by the removal of the overtone, and in the sec-

ond place by the restoration of the heart. The overtone is best treated in the beginning by the administration of nitroglycerin at such times in the day as it may be needed. Our own very definite experience is that nitroglycerin is frequently badly borne in the morning while it is very useful in the afternoon. This is combined with digitalin, which is often administered in the morning, and other appropriate drugs are used to meet special physiologic indications pertaining to the liver, etc.

Equal in importance to drugs in the cure of hypertonia and the restoration of the heart is exercise. The nervous function which presides over the maintenance of tone in the blood-vessels is closely allied to that which presides over the maintenance of tone in the voluntary muscles, so that anything that improves the health of the voluntary muscles tends to the correction of overtone in the blood-vessels. Outdoor exercise, such as walking, does very well, but there is an undoubted advantage in the resistance exercises, as they seem to have a greater influence in this matter of tonus.

The diet should be very simple, without sweets and red meats. Mental efforts of all kind should be limited as much as possible.

#### *This Treatment Successful in Practice*

Under this plan of management we have had the satisfaction of seeing a number of patients recover from various degrees of aphasia and paralysis and who lead very comfortable, although of course, guarded lives.

More satisfactory still have been those patients who have come under observation before a serious accident has happened and in whom a recognition of the tendencies and an adjustment of the influences have led to prolonged usefulness.

This has happened even in cases where a slight clumsiness of a limb or a temporary loss of words or an attack of confusion of mind, or even a temporary unconsciousness have been the warnings. Months before these things appeared it is perfectly possible for one familiar with circulatory disease to have detected overtone in the circulation.

# A STUDY OF THE PRINCIPAL ALKALOIDS

With reference to their periods of absorption, the duration of their action and their routes of elimination from the body. A continuation of the paper in the February number

By J. M. FRENCH, M. D., Milford, Massachusetts

**A**CONITINE is rapidly absorbed by the tissues, and is largely destroyed by oxidation, disappearing from the blood, so that its medicinal effects do not last long, and it may be administered in small doses at frequent intervals. The effects of a full dose last for three or four hours.

The effects of a poisonous dose are thus described by Hookma Tresling: "The dose (3.6 milligrams of crystallized aconitine) was taken at half past four in the afternoon, just after a meal. At half past five the patient was very ill. He grew worse, and died at nine o'clock, four and one-half hours after taking the dose."

In relatively large doses death occurs very promptly, and if given hypodermically, the fatal result may follow in less than a minute.

Shaller dissolved one granule of amorphous aconitine (grain 1-134) on the tongue, and at the end of three minutes felt a peculiar numbness at the point where the granule had dissolved. At the end of fifteen minutes this slight numbness or feeling of heat had gradually extended into the fauces and pharynx. These sensations lasted over an hour.

Aconitine is excreted mainly by the kidneys in the urine, but minute quantities have been found in the bile and the saliva.

## *Caffeine*

Caffeine penetrates the organism rapidly, its effects are evanescent, and its elimination is rapid, chiefly by means of the bile and the urine.

The more the kidneys are diseased, the slower is the elimination of caffeine. Zenetz found caffeine in the urine fifteen days after its administration had ceased.

Caffeine acts upon the secreting cells of the kidneys, stimulating them and causing diuresis. Both the liquid and the solid constituents of the urine are increased by it, thus proving it to be one of our most efficient diuretics.

Cushny tells us that caffeine is excreted in the urine to a very small extent as such. During its passage through the body it loses its methyl groups, and first becomes dimethyl, and then monomethylxanthine. Eventually xanthine is formed, and this breaks up probably into urea. In the urine are found small quantities of the unchanged drug, accompanied by larger quantities of dimethylxanthine, heteroxanthine, and xanthine. The most important property of caffeine from a therapeutic point of view is its power of increasing the secretion of urine.

Caffeine is excreted as such only in small amounts and very slowly by the kidneys. It is largely broken up in the system, and probably passes off as urea. It is also eliminated to some extent by the bile.

Such are the conclusions arrived at by the principal authorities.

## *Cocaine*

Some cocaine is excreted by the kidneys in the dog when it is absorbed into the blood, but 95 percent of it is destroyed in the tissues; and this is the fate of all of it in the rabbit, in which this oxidation proceeds very rapidly. It is unknown whether it is oxidized in man, who is more susceptible to its action than these animals. (Cushny.)

When administered by the stomach cocaine can manifest its effects in twenty minutes; by the subcutaneous method in ten minutes. It appears first in the urine.

It is eliminated by the mucous membrane also. (Liebreich.)

It is absorbed with remarkable rapidity from all mucous membranes, but it cannot penetrate the unbroken skin. Hypodermically its effects are almost instantaneous. A girl of twelve met death in forty seconds from a hypodermic injection of twelve drops of a 4-percent solution. A small amount escapes by way of the kidneys. (Zemp.)

Myrtle reports that he dropped three minims of a 3-percent solution into each eye, when at once the patient experienced a sense of numbness in the back of the tongue and throat, with palpitation and threatened syncope, and also nausea.

Whistler, after the application of a 4-percent solution to the nasal cavity, noted vertigo and threatened syncope.

Baler mentions a case in which the injection of one grain into the gums by a dentist produced death in a few minutes.

It is evident from these statements that cocaine is absorbed with great rapidity, acts promptly, and passes off through the kidneys without any great delay, hence requires to be given in small, frequent doses in order to keep up the effect.

### *Digitalin*

Koppe found that 2 milligrams (gr. 1-33) of digitoxin, a single dose, given to an adult man, caused toxic symptoms, very violent and persisting many days. Megevand took one-third of a milligram (gr. 1-200) of Natavalle's digitalin for six consecutive days. The pulse began to slow on the second day, fell more rapidly each day, the lowest point being reached on the seventh day, when he felt nausea followed by vomiting and headache, intense and persisting until the following day. The pulse had fallen to 48, and it was not until the twelfth day, six days after ceasing the use of the drug, that it returned to its normal beat, 67 to 70.

The same observer for seven consecutive days took a daily dose of 4 milligrams (gr. 1-16) of Homolle and Quevenne's digitalin. On the fourth day came the first fall of the pulse, of five beats; and it was four days

after the cessation of the drug that the pulse returned to its normal rate of 67. Toxic symptoms due to the accumulation of this digitalin were observed by Homolle, as nausea, headache, and delirium. These disappeared after twenty-four hours.

Digitalin is eliminated in part by the kidneys. (Dragendorff.)

Zemp states that the absorption of digitalis is exceedingly slow, no matter how it is given. When given by the mouth, hours and sometimes days may elapse before its full effects are obtained. It is absorbed by all mucous membranes, although it is more or less irritating to them. It is also rapidly absorbed from the skin.

While its absorption is slow, its elimination is more so. Consequently the drug accumulates in the system and may manifest itself suddenly by the onset of toxic symptoms. As it is used in conditions in which the circulation is disturbed, this no doubt contributes to the slowness of its action. How it is eliminated is not positively known. It probably escapes by way of the kidneys, but the larger part is supposed to be oxidized in the system. Digitalis and its active principles cannot be relied on in cases of emergency when it is necessary to stimulate the heart quickly.

Lutze claims that digitalis acts over six weeks.

Shoemaker speaks of the slowness of its action, requiring from thirty-six to forty-eight hours, in reducing fevers, etc.

Potter says that digitalis is slowly absorbed, and slowly eliminated by the kidneys.

While there are a number of different active principles of digitalis, and these may vary somewhat in their rates of absorption and elimination, yet it is not likely that the difference is great. It is evident from all sources that in digitalin—taking this as a representative of the combined active principles—we have a sharp contrast to cocaine. Its action is slow, and its duration is for a considerable time. Its elimination is by the kidneys, at least to a considerable extent.

My chief excuse for presenting these fragmentary statements and partial con-



clusions is found, first, in the belief that, fragmentary and partial as they are, they are nevertheless of value; and secondly, in the desire to call attention to the lack of completeness, the many links in the chain that are lacking, in the hope of leading future original investigators to give attention to the information which now is lacking,

and thus supply the missing links. In a third paper, if able to obtain sufficient information concerning other alkaloids, I shall present it, and also arrange the main facts which have been learned, in the form of a table which will show at a glance what is known and what is lacking in our knowledge of these drugs.

## THERAPEUTIC NIHILISM AND THE ALKALOIDS

The experience of a young physician, who has put into practice the principles of treatment advocated by Clinical Medicine and found them good, with some case-reports

By M. SHADID, M. D., Maxville, Missouri

I LEFT college a therapeutic nihilist. All my professors (anatomists, surgeons, pathologists, and even the clinicians), except my professor of therapeutics, were therapeutic nihilists. The surgeons particularly seemed to delight in making fun of drugs, and being by nature a skeptic I drifted into nihilism.

Being a therapeutic nihilist I consistently took no interest in therapeutics, and when I left college I memorized a few prescriptions of iron, quinine, mercury, strychnine, etc., hung out my shingle, and took in the fees—when I could get them!

### *"Clinical Medicine" as a Therapeutic Missionary*

Soon afterward, by mere accident, a copy of CLINICAL MEDICINE fell into my hands. Here by way of digression I may say that it would be well for the management of CLINICAL MEDICINE to forward a sample copy of this journal to every member of the graduating class of every medical school in the land. I mention this because I received none myself and presume that none were forwarded. I glanced over my copy and then read it. Before I finished reading it a change had taken place: I had been a mere skeptic; I became a skeptical skeptic. I had been skeptical toward medical therapeutics; I became skeptical toward thera-

peutic nihilism. It could not have been otherwise. The optimism and enthusiasm and buoyant therapeutic positivism which looms up in every copy of this journal cannot but impart to a receptive mind a conviction that even confirmed nihilists cannot escape.

I subscribed for this and other journals. I took a "cranky" interest in the alkaloids. I bought Shaller's "Guide." The article on aconitine was so paradoxical, compared with what I had been taught, that I at once commenced to try it.

It acted like a charm. In dosage according to Shaller's Rule, given every ten, twenty or thirty minutes till effect, and then less frequently as needed, it never failed. I have used it for the past ten months in sthenic fevers to the exclusion of other antipyretics without a failure. I am aware of possible contraindications, in weak, adynamic and asthenic conditions, for instance, but since I began to use it I have never met with such a case; and by the way—a mere coincidence of course—I have not lost a patient for a year past. During this time, too, I have treated six cases of pneumonia in children, three of which were as typical cases of the disease as ever you saw in your life, and two in adults. Not one of the above cases lasted over five days. Jugulation? You bet!

Aconitine is a great jugulator; under its influence acute inflammatory disease is aborted or shortened. The following is a report of two cases that I have treated:

Case 1. At 11 p. m. I was called out to see an eight-year-old boy. Temperature 103°F., pulse 150, respiration 40. The face was flushed and the eyes bright; countenance was anxious. There was a history of slight chilling that evening. Auscultation showed harsh, bronchial breathing. There was pain in the left side. I prescribed one grain of calomel and one of podophyllin to be given in six doses; a flaxseed-meal poultice to the chest and back every two hours; and aconitine according to Shaller's rule. I gave the aconitine myself till 1 o'clock p. m., when the temperature fell down to 101°F. and pulse to 120. Next morning the father told me that the patient went to sleep shortly after I left and had a profuse sweat. The pulse was now 95 and the temperature 99; the patient up and playing.

Case 2. I was called out at 6 p. m. to see Mrs. E., age 30, mother of three children. She said she had a chill at 3 p. m., lasting an hour and a half. Her temperature was now 104°F., pulse 130, respiration 28. The cheeks were flushed. She had a headache and a pain in the chest. I prescribed calomel and podophyllin and a flaxseed-meal poultice as before, and administered 1-134 grain aconitine for three doses, one every half hour. After the three doses were given the temperature remained at 104.5°F. I might have given the doses more frequently, but that was one of the patients where I thought it advisable (for good reasons) to follow this course. I left and instructed her husband to keep up the dose of aconitine till the temperature fell to 102°F. and then to stop. Three more doses had the desired effect and one hour later the temperature fell to 101°F. Next morning the patient was well, although the pulse was 120 and temperature 99.5°F. She wanted to leave her bed but I insisted on two more days. That night she said she sweat "like thunder."

I believe the defervescence induced is very largely responsible for equalizing the cir-

culatation and for the jugulating power of aconitine.

The article on aconitine in Shaller's Guide should be in the hands of every American practitioner of medicine.

### *The "Clean-Out, Clean-Up and Keep-Clean"*

#### *Treatment*

The "clean-out, clean-up and keep-clean" treatment I practise continually and can say positively that it is applicable in almost every case. In my short experience of medication I have not met a single case or condition of disease where such treatment was contraindicated; on the contrary, it has been an aid to recovery in every case in which I used it.

I have recently been called to see a patient with what I believe was acute cardiac dilation. The temperature was a little below normal, urine very scanty, with pain over the kidney region; heart-beat 60, no valvular murmur. The respiration was labored, breath foul, as were later the stools. Patient 60 years old. As I wanted to try that eclectic remedy I prescribed apocynin; also two plasters over the kidney region to relieve congestion therein; then instituted the "clean-out, clean-up and keep-clean" treatment, using a saline laxative three or four times a day and the intestinal antiseptic. Three days later the patient was up and around. He told me that last year Dr. O. treated him for the same trouble, but he was in bed seven weeks. Dr. O. is a therapeutic nihilist and "let nature take its course"—a very long course, however, and often, too often, a fatal course. The "clean-out, clean-up and keep-clean" treatment in my estimation was in this case as much responsible for an early recovery as the other measures, or more so.

Calx iodata is the remedy for croup and croupy affections, but there is trouble in store for those who expect too much of it. The other night I was hurriedly called to join a priest who was called out to see a fourteen-year-old girl die. At my arrival I found the patient tossing from side to side and trying to get more air into the lungs. The face was pale, the breathing

stridulous and spasmodic, the heart irregular and the patient in a semistupor. I administered gr. 1-20 apomorphine hypodermically. This was followed by vomiting and immediate relief of the dangerous symptoms.

The patient had been ill for two days with a temperature ranging from 99° to 101°F., but with no prominent respiratory symptoms except spitting of blood on the previous evening. I left the patient on iodized calcium, and the next morning, to make sure, I administered diphtheritic antitoxin. I was in the backwoods, else I would not have delayed its administration. The patient recovered. This case illustrates the value of the maxim, "When in doubt, administer antitoxin."

I may go on relating some of my experiences with other alkaloidal and synergistic preparations, such as copper arsenite, calmative for infants, infant's anodyne, the anticonstipation granules, but my object in this article is simply to add my humble testimony, as a country practitioner, to the efficacy of the alkaloids and to the better method of alkaloidal medication.

The other day I was preaching active-principle therapy to a couple of former classmates, now internes at a city hospital. They seemed to find satisfaction in rehashing some of the stuff said about the hyoscine, morphine and cactin compound in some corporation-ridden medical journal. I let them talk themselves empty, and finally my

parting shot was something like this: "I don't know [Abbott personally or what kind of a man he is. I am not particularly enthusiastic over *the man*, as I am no hero worshiper. Abbott may be an eclectic, but I, too, am as much of an eclectic as I am a regular. Among eclectic and alkaloidal remedies there is many a medical gem, and before you leave this hospital subscribe to *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* and to at least one eclectic publication, say *Ellingwood's Therapeutist*, and get into line. I personally take interest in and read up on eclecticism, homeopathy, osteopathy, hydrotherapy, suggestion, the tissue remedies, alkalometry and Christian science. If you wish to succeed, do the same, and it won't hurt you. Good bye."

—

[Thanks, Doctor, for the many complimentary things you have to say of *CLINICAL MEDICINE* and for your endorsement of "the alkaloidal idea." It's this approval, born of success, that helps us to "keep going," to make new friends, in the face of the violent opposition which is constantly being handed to us. It so happens that Abbott is not an "eclectic." He is just as "regular" as his critics, a graduate of the medical department of the University of Michigan. But he has gleaned many useful ideas from eclecticism which he is trying to pass along to *THE CLINIC* "family." —ED.]

## A TRIBUTE TO THE COUNTRY DOCTOR

A poetical testimony to the work and worth of "that uncalendared saint"—the country doctor! Now first printed for the edification of the "saints" of the "Clinic family"

By GEORGE F. BUTLER, M. D., Wilmette, Illinois

Head and Professor of the Department of Therapeutics and Professor of Clinical Medicine, Chicago College of Medicine and Surgery

LET us for a space withdraw from alluring cognizance with metropolitan practice and turn to contemplate the rugged yet heroic career of that uncalendared saint, the Country Doctor—about the

only specimen of the Family Doctor left to us.

No generous plaudits of the multitude inspire, no learned encomium of metropolitan brethren rewards the humble zeal which ani-

mates his labor. Through scarce-trodden wilds his urgent path is hewn; the elements of nature serve to invigorate his lonely thought and experience, and only the noblest humanity and a brave self-reliance mold in him the grace of a resourceful energy. His motive is pure; his courage indomitable; his moral stature commanding. The sternest verities of life have confronted him in the exercise of a profession embracing the highest service to mankind. It is the Family Doctor's glorious mission to dispel the gloom which shrouds the shadowland of disease; to nerve with benignant hope the prostrate and forlorn, and by his magic touch revive the wasted energies of fellow-man. From birth to death, from the cradle to the grave, no human being stands to us quite in the commanding relation of the Family Doctor. Nay, as by an angel-presence, it is his to shed a ray of serenest comfort in many a distracted household; to illumine the desolate places of earth, and disperse the gathering clouds which no spiritual commiseration can wholly exercise.

I see him now, of grave and reverend mien,  
The country doctor perched aloft in chaise  
Of antique pattern and with stately march  
Wending his way to minister to them  
Who patiently await his coming. True,  
His guise is homely, but a light serene  
Beams on his godly countenance and illumines  
The simple zeal that stirs his aged pulses—  
As sunlight crowns some venerable structure,  
Tinging its rugged outline with a grace  
Made lovelier by contrast.

Nature, too,  
Seems conscious of the wonted guest, and o'er  
The lonely visitant her mantel spreads  
Of silent benediction, while aglow  
With woodland treasures earth in floral gems  
Breaks at his feet.

And this is he whom Science hath endowed  
With the high gift of bearing unto men  
Tidings of hope, of soothing mortal pain,  
And unto many a Lazarus speaking words  
That wake him from his torpor. To his thought,  
Imbued with human feeling, there is none  
Of all his kind that doth not claim his care,  
In all the world no fellow-man so low  
As to repel his tender sympathy.  
True, on the worldly side, his ledger's page  
Shows many a mournful deficit, and care  
Has furrowed his quaint cheek and laid its hand  
Full heavily upon his lonely life.  
Still, in his heart there glows a steadfast fire  
That moves him to the task which he has chosen  
And tinges all his acts with nobler aim,

Calming his days with thoughts of pure endeavor,  
Transfiguring the humblest deeds of his career.

And now his weary pilgrimage is o'er;  
Across the meadow lies the quiet spot  
Sacred to human suffering. 'Tis over,  
And eagerly the good man hastens on  
Towards the cottage where the light of love  
Kindles a holy fire. Ah, guard ye well,  
Sweet ministers of mercy that fine fervor;  
That, moved as by some gentle miracle,  
His skill may summon consolation's balm,  
And the dread thought of pain at last be stilled.

How lovely lies the fevered maid,  
The flush of subtle pain  
And sorrow of deep suffering  
Tinging her desolate thoughts beguiled  
By tender ministrations. Closely cling  
To that young life, ye Fates, and bid her smile  
again!

Beside his charge the doctor bends to note  
Her labored breathing; marks the comely face  
And trembling tears that linger on the lashes  
Of her closed eyes; softly strokes her hair,  
And marvels long that one so beautiful  
Should be thus stricken—for he knows too well  
The scorching grief of many a Magdalen;  
And his great, loving heart is bowed with pain—  
"Who is without sin among you," he remembers;  
And all his generous feeling breathes in prayer.

She wakes: the pride of youth illumines her face—  
"And honor gone!" She murmurs, "Say not so,  
Guardians of grace; it shall not be so soon—  
Yet I do love him—were I trebly lost  
That kiss would still enchant me." Then she  
looked,

And saw as in a vision the good man  
Bowed at her bedside, and her speech grew calm  
As in his rugged palm she laid her hand  
And sought to show by childish, loving ways  
The softening influence of her strong emotion.  
Perchance no sedative but death could soothe  
Those shattered senses or the wild despair  
With which her feelings wrestled; yet anear  
She knew the heavenly token of forgiveness:  
"Hath any man condemned Thee?" "No man,  
Lord!"

And with a wan smile closer still she crept  
And laid her comely head upon his breast  
In silent benediction.

On the hillside  
Where springtide blossoms hallow the rude spot  
And gathering woodbirds chant their matin hymns,  
A simple headstone marks her humble rest,  
Bearing the brief memorial of her years,  
And the profounder tribute, "She loved much."  
Pause, stranger, by a shrine so eloquent;  
The anguish of her lot commands your pity,  
And this secluded earth is venerable  
E'en through the sorrow of her early years.  
The windflower creeps to grace her nameless dust;  
The heaven is blue above her, and the winds  
Sigh tenderly in loving requiem.  
The hapless fate that overwhelmed her spirit  
Compels a pure remembrance. By her pain,

Even though scarlet, are her sins forgiven,  
And the soft air that breathes above her rest  
Seems wafted by the angels.

Go thy way,  
And in the darkness of a sheltering gloom  
Perchance a gentle voice shall call to thee,  
Blessing with passionate utterance of woe,  
And nevermore shall night of gloom enfold thee,  
But thou shalt bear her story reverence,

And grow to understand that boundless grief  
And the nobility of soul that moved  
The gracious charity of her steadfast friend.

So lowly clay semblance of the divine  
Assumes; so, fired with tender zeal,  
Mortal in godlike guise doth make appeal  
To human hearts. O'er speechless pain doth shine  
The morning of a blessed avatar  
Bend, ye blue heavens, to greet him from afar!

## THE THEORY OF HOMEOPATHY

This article is the synopsis of lectures delivered at the  
New York Medical College for Women, in 1907.  
It gives a complete outline of homeopathic doctrine

By P. W. SHEDD, M. D., New York City

Associate Editor, American Journal of Homeopathy

### II

ONE may say that if we inject into the absolutely healthy body of some animal, for example, an overwhelming number of tubercle bacilli, it will develop tuberculosis. It will, and it will die, as it also would from the blow of a club or a rifle bullet, for vitality has its limits of resistance.

Man is born with a vital force which may be compared to the mainspring of a watch; if it is doomed to run down, and the vigor of youth will inevitably pass into decadence and senescence as the imparted tension relaxes and the elements call for transmutation. An old woman, past the century-mark, said to the physician who was laboring to keep her alive: "Doctor, my body yearns and calls for death as it used to for sleep. Do not hinder me."

#### *The Direction of Homeopathic Science*

But we are not discussing natural senescence; such death is as natural as birth. Homeopathic science is directed against two things: First, the condition of receptivity; second, the condition of receptivity plus infection. To illustrate the first, let us observe a child considered healthy by its parents: it plays, eats, sleeps about as other children do, but to the homeopath the child calls for *calcarea carbonica*, and if it gets it, will be spared probable illness and possible death

The same child, ill with diphtheria or other infection or trauma, moral or physical, falls into focus as an illustration of the second condition.

Disease, then, is not an entity, but the receptivity of the individual (always, and necessarily, individual) plus the proximate cause: bacillus, bacillary toxin, or what not. The bacillus, or its toxin, is a constant factor; receptivity, or the condition of vitality, varies in each case; therefore the disease can be recognized therapeutically, only through the totality of symptoms, even as a chemical change is ascertained by the totality of its reaction alone. Therapeutically, also, in infectious diseases, where we have a constant factor, clinical experience has delimited the choice of the remedy in the vast majority of cases to certain groups: the diphtheria group, the typhoid group, the scarlatinal, rubeolar, and other groups, and prescription in acute infections is commonly more easily made than in chronic diseases.

Modern science (nonmedical) is arriving at some hitherto strange conclusions regarding this thing we call "matter." Renan once said: "Matter and spirit approach each other in the infinite," and, had he been a homeopathic philosopher, might have added, "or, in the infinitesimal." Matter is no longer looked upon as something dead, inert; the very stones have life, and the atom has given place to the concept of the electron,

negative elements whirling about in a sphere of positive influence. This form of energy, or matter, approaches closely enough to what Hahnemann termed the spirit-like, or dynamic, principle, to rehabilitate the homeopathic philosopher in the vision of modern science.

Contrast Hahnemann's Organonic philosophy, or inductive science, with modern theories, with the uric-acid theory, with the carbon-dioxide theory, and numberless others, with their confusion of end-products with exciting causes. Note also the practical benefit derived from many of the treatments enforced by the builders of these theories; beneficial because the patient is compelled to return to a diet, hygiene, exercise and life approaching nature; and the best of these theories are those where drugs, as used by the old school, are taboo. In so far as such theories tend to foster preventive medicine they are harmless, even excellent; but do not confuse them with the exact science of therapy.

What the essential nature of the action of the homeopathic remedy is, does not enter into practical therapeutics, and Hahnemann says: "As this law of cure manifests itself in every true experiment and observation, the *fact* consequently is established; it matters little what may be the scientific explanation of how it take place." This is contrary to much in old-school medicine, where scientific explanation is the thing, while facts may take care of themselves.

## 2. *Pathogenesis, or Drug Disease*

To observe keenly, diagnose accurately, and interpret correctly the phenomena and essential composition of disease, would be scientifically interesting but therapeutically thankless if we must go empty-handed to the bedside. To know the how and why of disease without being able to apply suitable remedial agents is like asking a jeweler to repair a watch (whose mechanism he may well understand), at the same time taking from him his delicate and suitable instruments. Hahnemann put this therapeutically when he said: "The first and chiefest duty of the physician is to heal the sick."

In his anxious endeavor to relieve the patient, Hahnemann exalted therapeutics over what we term "clinical diagnosis." This was pardonable. If we recall the comparatively recent introduction of such simple matters as auscultation and percussion into medicine, to say nothing of the host of microscopic, chemical and instrumental procedures which the modern clinician demands, the old man may be forgiven a few imperfections. Nobody was much on diagnosis in Hahnemann's day, and as for treatment . . .

"Dies iræ, dies illa  
Solvat sæclum in favilla."

It is the essential glory of Hahnemann that he wrought out the concept of testing each drug-substance simply and singly upon the healthy human organism. If we meditate a bit, we shall apprehend how impossible it is to get the delicate reactions of vitality against a morbid agent other than by this method. How else is any disease diagnosable, clinically verifiable. Animal experimentation can never be more than corroborative of certain gross or microscopic lesions, and even here objective phenomena vary often with the species. Thus, lethal belladonna has no poisonous action whatever on goats and rabbits; on the carnivora it acts with moderate intensity; on man with the greatest intensity.

If a drug-substance be given to a diseased organism, the results are practically valueless in other cases because of the disease complication which obscured the reaction; if we administer two drugs we have an additional complication. If we give two or more drugs simultaneously to the healthy organism, we learn little or nothing about the reaction against the individual drugs. And, if there be a law which governs and intercalates the two series of facts presented by the drug-pathogenesis and the disease-pathogenesis, a law which has been demonstrated and may easily and always be demonstrated to be practically useful, why disregard it and cast off the greatest factor in scientific therapy (so far as drugs are concerned)?

Homeotherapeutics is the most practical system of drug-therapy not because Hahne-

mann said so, but because Nature said so, of whom he was a most faithful interpreter. Hahnemann was no theorist; he was a scientific observer in his field of work and an inductive logician.

### 3. *Primary and Secondary Effects or Actions*

This division is naturally derived from the preceding... The two sets or series of drug effects, or, to speak more accurately: the primary drug-effect; the secondary vital reaction, and their relation with the phenomena of disease afford us the derivation of the two known laws governing therapeutics: the homeopathic, individualistic, specific; the antipathic, or generic.

If we administer *nux vomica* in sufficient strength to the healthy organism, we get primarily excitation; after a certain period the vital force reacts in an effort to recuperate the lost energy, and paralysis or torpor results. *Gelsemium* is paralyzant or depressant in its primary, or drug-action; the secondary action is an endeavor on the part of vitality to resume its activity, and the nervous system, which is the chief point of attack, reacts sthenically.

Thus we see that drugs administered antipathically are given for conditions correspondent to the secondary effect of the drug; *nux* in asthenic, atonic conditions as a stimulant; *gelsemium* in sthenic conditions, as a depressant. Homeopathically, drugs are given in conditions correspondent to the primary effects of the drug when used in physiologic dosage; *nux* in irritability; *gelsemium* in depression.

### 4. *Potency; Repetition of Dose; Alternation; Homeopathic Aggravation*

(a) *Potency*.—The potency, or dilution, question is a bone of contention among theories—either of the high or low potency stripe. With practical men it resolves itself into: (1) Clinical experience. (2) Estimating the sensitivity of the patient to drug-action. (3) Knowledge of the fact that some drugs, particularly those whose action seems to enter deepest into metabolism: sulphur, lycopodium, *natrum muriaticum*, for ex-

ample, apparently develop greater or unsuspected power through dynamization, or dilution plus succussion. (4) Sometimes the acuteness or chronicity of the disease may decide a trial of a certain dilution.

The most difficult part of the problem is the selection of the drug; the suitable potency is more easily located. Never allow yourself to be swayed by either a tincture or high-potency individual. Either may be as bigoted as the most rampant old-school scoffer... The masters in any science become so through personal experience, not hearsay; and the advantage of a school, college or university lies in that the developing mind is brought into contact with many minds, and should assimilate from each, never, however, losing individuality and the right of personal judgment and application.

(b) *Repetition of Dose*.—For this we return to the fundamental concept of vitality, and repetition is dependent upon how soon vitality reacts, and upon how soon it should begin to react. In pneumonia, for example, things may have to move swiftly, by the hour, or less. The allowable reaction-period is here very different from that possible in a chronic cardiac or renal case. When reaction begins, lengthen the interval or stop the drug. If the remedy has been found, dosage indications will soon be obtained from a study of the patient.

(c) *Alternation*.—Permissible theoretically and practically, if alternating conditions develop, as in Hahnemann's classic treatment of a typhoid epidemic (1841), where he used *bryonia* and *rhus*. It might be permissible where your best judgment and knowledge were unable to decide between two drugs. Such cases may arise, or others where there are no alternating states but the patient presents a complexus which seems to partake decidedly of the characteristics of two remedies. Such cases are more frequent in earlier practice, and become rarer as knowledge, theoretic and practical, of the resources of the *materia medica* is extended, but, beware the omniscience of the transcendentalists, whose cases sometimes show a curious and rapid

succession of remedies quite incompatible with omniscience, and also bear in mind that "the first and chiefest duty of the physician is to heal the sick," and not to sacrifice unconditionally a patient to a theory, however excellent theoretically, and generally practicable. From the standpoint of personal scientific growth (and if you do not grow, you will die) any alternation is reprehensible, for the moment you depart from the single remedy, you enter into more or less confusion, which, if at rare times is seemingly necessary, should not be prolonged. In all but urgent cases, if you cannot decide between two remedies, use one of them for twenty-four to forty-eight hours; if reaction is not obtained, turn to the other.

(d) *Homeopathic Aggravation*.—When the patient has an aggravation of his complaints immediately following a dose or a few doses of the remedy, it may usually be taken as nature's certificate that the remedy has been correctly chosen, and that medication should be temporarily stopped, or a better potency (possibly higher, possibly lower) administered. You may practise for years without observing a true homeopathic aggravation, so gentle is the action of any reasonable dosage. In any case, do not worry over it. No harm has been done (unless the transcendentalists figure out some irreparable injury), and you need only patience to wait, and judgment when and how to continue the remedy.

### 5. *Acute Diseases*

These are "rapid morbid processes of the deranged vital force, which have a tendency to finish their course more or less quickly, but always within a moderate time. . . . They are either of such a kind as attack human beings individually, the exciting cause being injurious influences to which they were particularly exposed: excesses in food or an insufficient supply of it, severe physical impressions, chills, overheatings, dissipation, strains, etc., or physical irritations, mental emotions, and the like are exciting causes of such acute febrile affections . . . or, they are of such a kind as attack several persons at the same time,

here and there (sporadically), by means of atmospheric or telluric influences and injurious agents, the susceptibility for being morbidly affected by which is possessed by only a few persons at one time, or, they are epidemic or infectious or contagious, such as variola, mumps, measles, scarlatina, etc."

Vitality, when attacked by an acute disease, rapidly regains its equilibrium when the cause is removed or extinguished, in which process the indicated homeopathic remedy is commonly the most rapid and salutary means of aid.

### 6. *Intermittent or Alternating Diseases*

"The intermittent diseases deserve special consideration, as well as those that recur at certain periods—like the great number of intermittent fevers, and the apparently non-febrile affections that occur at intervals, like intermittent fevers—as also those in which certain morbid states alternate at uncertain intervals with morbid states of a different kind. These latter, the alternating, diseases are also very numerous, but all belong to the class of chronic diseases; they are generally a manifestation of developed psora alone, sometimes, but seldom, complicated with syphilis, and therefore in the former case may be cured by antipsoric medicines; in the latter, however, by alternation with antisyphilitics.

"The typical intermittent diseases are those where a morbid state of unvarying character returns at a tolerably fixed period, while the patient is apparently in good health and takes its departure at an equally fixed period; these states may be nonfebrile or febrile. When nonfebrile, they always belong to the chronic diseases, mostly to those that are purely psoric, and are successfully treated by antipsorics, yet it is sometimes necessary to employ as an intermediate remedy a small dose of a potentized solution of cinchona bark, in order to extinguish completely their intermittent type.

"With regard to the intermittent fevers that prevail sporadically or epidemically (not those endemically located in marshy districts) we often find every paroxysm likewise



composed of two opposite alternating states (cold, heat—heat, cold), more frequently still of three (cold, heat, sweat). Therefore the remedy selected for them from the general class of nonantipsoric medicines must either be able likewise to produce in the healthy body two (or all three) similar alternating states, or else must correspond in the most homeopathic manner possible to the strongest, best-marked and most peculiar alternating state (cold, hot or sweating), but the symptoms during the apyrexia must be the chief guide to the most appropriate remedy.

"The most appropriate and efficacious time for administering the drug in these cases is immediately or very soon after the termination of the paroxysm; it has then time to effect all the changes in the organism requisite for the restoration to health without any great disturbance or violent commotion. If the stage of apyrexia be very short, as in some bad fevers, or if it be disturbed by some of the after-sufferings of the previous paroxysm, the drug should be given when the sweat begins to abate or as the paroxysm begins to diminish.

"When, after the indicated remedy has cured several paroxysms, the same fever returns, after an interval of health, it is because the noxious influence that first excited the fever still continues to act upon the convalescent, as often happens in marshy districts; in which case a permanent cure is often only possible through a change of climate, i. e., by removing the cause."

The above paragraphs are excerpted from the "Organon." They sufficiently illustrate the homeopathic view of the subject.

#### 7. Chronic Diseases: *Psora*; *Syphilis*; *Sycosis*

The preceding section has introduced a term, "antipsoric," found exclusively in homeopathic literature. For Hahnemann's classic exposition of chronic disease, Section 78 *et seq.* of the "Organon" must be read.

There have been voluminous sneers at Hahnemann's psora theory, and when the *acarus scabiei*, which causes the common itch, was discovered (*psora* is a Greek word meaning the "itch") there was an outburst

of joy. As a matter of historic fact Hahnemann was fairly cognizant of the "itch insect." In *Der Anzeiger, ein Tageblatt zum Behuf der Justiz, der Polizei und aller burgerlichen Gewerbe*, of July 30 and 31, 1792, appeared the following article, signed only by the initial "B."

"The itch itself does not consist of emanations or of congenital or acquired acridities of a salt or acid character of the blood, but it is derived from small living insects, or mites, which take up their abode in our bodies beneath the epiderm, grow there and increase largely, and by their irritation or their creeping about cause an itching, and owing to the afflux of humors thereby produced give rise to a multitude of vesicles, which, on being rubbed, or when the thin, watery fluid they contain has evaporated, become covered with scabs." Immediately after this is an addendum by S. Hahnemann, M. D.:

"The cause of itch given above is the only true one, the only one that is founded on experience. These exceedingly small animals are a kind of mite, etc." "And his treatment for the itch-mite was baths or washes of sulphureted hydrogen, sulphur ointment, etc."

Hahnemann used the term, *psora*, as a name for what his clinical observation had led him to view as a chronic miasm, or infection, merely because he noted that a receptivity for the itch-disease, with its actual, demonstrable, and removable cause, the *acarus scabiei*, was a characteristic, in his day especially, of the general morbid syndrome, or miasm, or infection, to which the term was applied as a specific name, just as "syphilis" (from two Greek words, *sus*, hog, and *philos*, lover) is applied traditionally to a certain disease syndrome. Considered in the light of modern bacteriology, microscopy and pathology, "psora" may very possibly be identified with what some of our friends term "the great white plague," scientifically known as tuberculosis. But Hahnemann, we know, did not have a modern high-power microscope, yet, his consideration of "psora" may possibly throw a little modern light diagnostically

and therapeutically upon the "tubercular diathesis."

In studying psora Hahnemann developed a group of drugs which he found by experience most curative in the condition, and to which he gave the name of antipsorics. This does not limit their scope, for they are useful in other forms of disease, but merely gathers them together as peculiarly suitable in this condition. Most of them are characterized in their pathogenesis by a tendency to some form of dermal disturbance.

Syphilis is a well-recognized disease-syndrome. Our able modern bacteriologists were lately fighting over the cause, but seemed to have agreed upon the spirocheta

pallida as the "germ." The mercuries and iodides are the chief homeopathic remedies, their pathogeneses being most similar to the various stages and conditions developed.

Sycosis is a term used by Hahnemann for a disease-syndrome which, when we look at it with a 1-12 lens, seems to be gonococcal in type, or to present the acquired or hereditary states and conditions which this bacterium is likely to excite. And as an instance, bacteriologically, of how Hahnemann was about one century ahead of his time, we would advise the perusal of his treatise "On the Mode of Propagation of Asiatic Cholera" (1831), found in "The Lesser Writings" (Boericke & Tafel, Philadelphia, Pa.).

## CYSTIN AND CYSTINEMIA

An interesting description of a condition which has been studied but little, with some deductions as to its effects, its nature and methods of diagnosing and treating it

By JAMES WHITE MOORE, M. D., New York City

AS long ago as 1852 Dr. Geo. Johnson, of London, in his classic work, "Diseases of the Kidney," said: "Cystin, which is occasionally found in the urine as a product of disease, contains no less than 26 percent of sulphur."

Being present very often in the blood and occasionally found in most of the excretions of the body, cystin deserves careful consideration. It is hexagonal in its typical crystalline form. Its presence in the microscopic examination of blood is safely determined by its well-known and characteristic appearance in the urine. No other crystals found in the blood are at all likely to be mistaken for cystin, whatever their form or departure from their strict type.

### *Appearance Under the Microscope*

When the rays of light from the mirror of the microscope pass at right angles through the crystal, it appears bright and clear like glass. The rays of light that strike the

crystal at an oblique angle cause such surfaces to look black, so that the crystal is made to have very clean-cut, sharp lines. The hexagonal form of the cystin has been found in the liver and blood, but in the blood the crystals are mostly irregular or slightly hexagonal, due probably to floating about and rubbing against the walls of the blood-vessels. The crystals are very friable, and often are seen in the blood as crystalline particles grouped; but whatever their form or whatever their size, seen either singly or *en masse*, the crystals never lose their characteristic appearance. Yet sometimes a crystal is found in the blood so obscured by the coloring matter of the blood or so enveloped by blood-cells and fibrin or broken-down epithelium from the walls of the blood-vessels that nobody can tell what particular kind of crystal it is.

Cystin calculus is very rare, in spite of its total insolubility in pure water; also on account of the slow elimination of cystin from

the kidneys, while other gravel-forming substances are often eliminated in large quantities at a time, for example, uric acid, the urates, phosphates, and oxalates and carbonate of calcium.

Gravelly conditions in general are remarkably common among poorly nourished children of the lower classes and also in the well-fed adults of the rich. This fact goes to show that these so-called diatheses of gravel are metabolic deviations from the normal, occurring as often in the poorly nourished as in the over-fed. The real cause of the same results in these two extreme conditions of life is due not first to the character of the foods and drinks but to their fermentation.

The normal metabolic changes in the healthy cell just balance one another, but when this cell begins to live upon unhealthy foods or an overabundance of foods or a too-long-continued use of one kind of food, good or bad, fermentation sets in within the cell. Then result gravelly conditions and intoxications of various kinds and degrees.

Cystin does not pass into the tissues except in solution. The cystin that appears in the urine as crystals comes from the malpighian bodies and mostly occurs in the granular form. It can often be seen by the unaided eye. Seldom are heavy deposits found daily.

By cystinemia is meant such a persistence and collection of this peculiar compound in the system as to produce any great disturbance of the body.

#### *Some Results of Cystinemia*

This condition results in various forms of disease. The formative departure is in the alimentary canal. Later on the blood becomes thick and ropy. Cystin may be excreted by any of the mucous surfaces, especially the kidneys, bronchial tubes and the epithelial surface of the bowels, but in all these cases it is always found in the blood, sometimes in the urine, expectoration and the feces. Its local manifestation is only a symptom of the systemic condition.

Cystinemia is likely to affect the nervous system, often producing great nervousness, even paralysis. Insane patients have shown

much cystin. It is present in nasal and bronchial catarrh, and when affecting the small bronchial tubes produces asthma. By reason of its production of thick and ropy blood it produces a gouty kind of rheumatism. Cystinic rheumatism is apt to enlarge the joints, owing to the insolubility of cystin, and the ordinary remedies given for other kinds of rheumatism have little or no effect. Cystin produces a gouty condition of a chronic form—it does not produce acute rheumatism. It is rare that its presence in the blood is not observed at any examination of a marked case of this disease. Its presence in the urine is not constant, even in bad cases, and probably this is the reason why cystinemia is often overlooked by many physicians who seldom examine the urine of their patients and never examine their blood clinically. The method of examining blood by making thin smears of a scanty drop would not be likely to detect cystin.

Cystinemia often runs in families or near relatives; some members will show great nervousness, others gouty symptoms, others bronchial or asthmatic troubles. This is more noticeable in long-settled communities of the same breed of people. The pilgrims and other colonies brought all their peculiarities with them.

#### *The Storms of Elimination*

There seem, in some cases, to be occasional storms of elimination of cystin, either by the lungs or bronchial tubes, the bowels or the kidneys. Sometimes the urine becomes so loaded with the cystin that the whole excretion has a turbid or milky appearance. This cystin is in an amorphous form. To prove that this granular matter is cystin and nothing else, precipitate to the typical form by the well-known reagents.

These storms or explosions of cystin from the system are followed by a sense of relief, especially to those of a neurasthenic type. They experience a sort of *bien etre*, just as some feel better after a cry and a liberal flow of tears. These people rival Niobe in their weeping. When cystin attacks the epithelial surfaces of the bowels it often produces chronic diarrhea. Frequently there is pro-

nounced dyspepsia, congestion of the portal circulation, and dizziness.

"Cell Pathology Virchow" found cystin in the liver. It has also been found in the lymphatic glands and spleen.

In the asthma produced by cystin, some of the crystalline matters are often dark, like coal-dust, but the proof that these crystals are not coal-dust is the fact that the crystals are largely found within the cells of the epithelial surfaces; for cells do not take up solids except in minute forms, as for instance emulsified fats. Moreover, in cystin-asthma the blood always, and often the urine, shows plainly the cystinic condition at the bottom of the trouble. This condition constitutes gravel of the lung. The cough with some is hard, metallic, ringing.

In spermatorrhea and uterine and vaginal catarrh cystin is often present. Cureting and douches give only temporary relief. This leakage and catarrh persists till normal digestion and metabolism is restored.

#### *Sulphur and Cystinemia*

Although cystin contains 26 percent of sulphur, the writer has not observed that the giving of sulphur by itself has anything to do with the production of cystin. It is, however, a fact that foods rich in sulphur often disagree with persons having cystinemia. They will observe that eggs and fish, both rich in sulphur, aggravate their subjective feelings and symptoms. But so will the excessive use of starch and sugar and the glue-tissues, as in soup.

The management of cases of cystinemia varies somewhat with the type of the disease and the condition of the patient, though the real cause is the same in all. To bring about healthy metabolism in the living cells, wherever attacked, and to produce elimination of the product of unhealthy action is the line of treatment. Cystinemia is a

chronic disease and requires a chronic treatment. Establish and maintain healthy alimentation. The diet is all-important. Give only such foods as each patient can digest. Be explicit as to the kind and amount of food, just as in infant feeding.

#### *Treating This Condition*

Examine the blood and urine at least once a week. Learn the condition of the stools. Keep the urine below 1020 by drinking water one to two hours apart from meals. Favor elimination by iodine or colchicum, or both, in very small doses, in an agreeable form. Use small doses of saline laxatives or mildest bitters with aromatics before meals.

Give full or large doses of hydrochloric acid after meals and at bedtime, bearing in mind that large doses of hydrochloric acid continued produce ropy blood. The blood examination will be the guide to the use of this most excellent remedy. Use it and stop it for a month, as needed.

For the attacks of nervousness use mild nervines, singly or in combination, such as lady's-slipper or its active principle, the valerianates, the bromides, scutellaria or its active principle—all in small doses repeated as often as needed. For hepatic and intestinal laxatives use euonymin, cascarn, aloin, all in smaller doses than the stock-tablets on the market (of 1-4 to 1 grain each). For the chronic diarrhea of cystinemia give vegetable astringents in a pleasant form or eudoxin or the sulphocarbolates.

In pure cystinemia do not use narcotics, arsenic, iron, quinine, strychnine, mercury, salicylates, alkalis, or saline laxatives. These may sometimes be of temporary use in complications, but as a rule they are worse than useless in cystinemia.

Dr. Robt. L. Watkins of New York says: "The quickest, easiest and surest way of detecting this disease is by the blood."





## REPORT OF A SURGICAL CLINIC

Given at the Post-Graduate Hospital, New York, and presenting cases of appendicitis, bile-tract adhesions and uterine prolapse, artificial synovial fluid, and paraffin displacement

By ROBERT TUTTLE MORRIS, M. D., New York City  
Professor of Surgery in the New York Post-Graduate Medical School and Hospital

THIS woman, 70 years of age, has been a sufferer for many years and under the care of pretty good authorities; has had different diagnoses made. Appendicitis has been diagnosticated. When I saw her Saturday her history was of the last attack of pain in the appendix region some months ago, and there is always more or less tenderness there. On palpation I find a hard fibrous appendix, and also tenderness at the site of the right lumbar ganglia about 1-2 inches to the right of the navel.

Tenderness at this point alone would convince me that the appendix had been the site of her attacks of abdominal distress, but I find the left lumbar ganglia 1-2 inches to the left of the navel equally tender with the right lumbar ganglia, consequently I would look to the pelvis for the origin of the impulse which leads to the sympathetic irritation of both groups of lumbar ganglia, and on making pelvic examination we do find prolapse of uterus of long standing.

### *The Case One of Infective Cholecystitis*

The patient says that several physicians have made a diagnosis, in the case, of gallstones. On examination of the gall-bladder region we find also much tenderness on deep pressure, but as pressure across the middle line of the abdomen gives rise to an equal

degree of tenderness, it is my belief that the tenderness is at the site of the semilunar ganglia, and that in all probability we need look only to the procidentia as the chief or only cause for her suffering. It will take only a moment, however, through a short incision, to make sure about the gall-bladder. This is now done, and I find very extensive, firm, old adhesions, all about the gall-bladder and ducts, engaging the pylorus and hepatic flexure of the colon. There are no gallstones in the gall-bladder, but the patient certainly has had various attacks of cholecystitis, and the doctors who made the diagnosis of gallstones were right, practically.

The only fault that I have to find is, that the diagnosis of gallstones is not an up-to-date one to make of this case. An up-to-date diagnosis is infective cholecystitis, and the presence or absence of gallstones is a matter of very little consequence.

In old times the decision to operate or not in appendicitis often hinged on the question whether or not there was something in the appendix. The biggest thing that ever got into the appendix was the bacterium. Today we are still quibbling in the same way over the question of presence or absence of gallstones, when the biggest thing that ever gets into the gall-bladder is, again, the bacterium.

The adhesions are all severed, and to prevent the recurrence I spread a sheet of Cargile membrane over the raw surface and then close the abdominal wound. As a rule I like to remove the gall-bladder in these old infection cases, but we have a good deal to do for this elderly patient still, and I want to get in and get out in a very few minutes.

### *Caring for the Procidentia*

The next step is to care for the procidentia. A suprapubic opening is made and incidentally we will examine the appendix region through this median-line incision. The doctors who made the diagnosis of appendicitis previously were quite right. The hard fibrous appendix is entirely surrounded by firm bands of adhesions which bind together omentum and loops of bowel. It takes but a moment to remove the appendix, and the interior shows from its scars the damage it has suffered.

The procidentia is to be cared for next, and I think, as a rule, it is best to remove the uterus altogether and make a very nice repair with careful separating of the broad ligaments in the middle line. In this case, however, it is necessary to work very quickly, so I scarify the fundus of the small uterus and fasten it to the peritoneum just above the bladder. This is not ideal treatment, but it is the one that I am choosing for this particular case. As the operation requires but a very few minutes, the perineum is next repaired by making a horse-shoe incision, pushing the scissors into the bulbocavernous muscle and opening them *in situ*; then repeating the process on the other side and stripping away the vaginal mucous membrane for a couple of inches. Now, by bringing the bulbocavernous muscles together in the middle line, the margins of the levator ani follow, the skin around is sutured, and you observe that we have made a very fine strong perineum in just five and a half minutes of time, and most of them can be done in one-half that time.

This woman had a fracture of the femur a year ago, and although a good recovery was made from the fracture, she has had such a stiff and painful knee since that

time that she has been a constant sufferer. Very often patients are discharged from hospitals after a successful union of fracture but with adhesions resulting from certain forms of treatment and from lack of attention, and consequently patients may go through life suffering from joint-adhesions which could be very promptly disposed of and which nullify the effects of good fracture treatment.

In this case I break up the adhesions of the knee-joint and find a good deal of roughness. We will now add the supplementary treatment which I have shown a number of times before the class, and which consists in the injection into the joint of an artificial synovial fluid, consisting of 1 part of boroglyceride, 3 parts of glycerin, and 4 parts of aqueous salt solution. It might be well to add enough salt to make the entire mixture isotonic with human blood, that is, 9-10 of 1 percent sodium chloride. As a matter of fact, however, the fluid which I used at the very outset has proven so satisfactory that I have not made any changes in the formula at all. It is adapted not only for joints roughened by adhesions but for "old, dry, creaky joints," and other cases in which there apparently is not enough lubricating material for mechanical comfort of the joint. I have used this fluid in old cases of gonorrheal synovitis, in old cases of rheumatism, and have even risked its use in tuberculosis of the joints after breaking up adhesions. The latter procedure is however to be applied with great caution and in carefully selected cases only.

There is remarkably little inflammatory reaction after injecting this artificial synovial fluid and patients often speak of comfort following a few hours after the injection has been made. In the knee-joint I have sometimes put in more than one ounce; considerably less is required for the hip and elbow-joints. The fluid is sterilized by heat, as is the syringe.

With my first cases I thought best to have the patients remain in bed for a week, fearing inflammatory action, but by experience I find that we can allow them to get out of bed almost immediately. The only case

which I have had in which the patient complained of pain was the case of a girl suffering from grave hysteria who had unaccountable adhesions of the knee-joint. These were broken up and the artificial synovial fluid was injected. She complained very much of the pain and was not benefited. This case was a marked exception.

#### *A Paraffin Displacement*

This patient on finding wrinkles were developing in her forehead and neck proceeded to avail herself of the face specialist's resources and paraffin was injected beneath the skin at several points. It was not injected at the right melting point and the consequence was that it was carried by metastasis all about beneath the skin, and gave rise to ugly masses of red induration.

The patient is a pitiable spectacle and hopelessly marked. We make several incisions over the site of the paraffin and remove the material. The wounds are brought together with the smallest size of catgut, which will be absorbed in forty-eight hours, and the wound-margins are held together by gauze covered with collodion, which becomes separated after the catgut is absorbed and avoids scarring. This is a very neat resource. We shall probably have to hunt after paraffin further at another sitting as it is impossible to trace all of its wanderings. I wonder that the beauty specialists do not get into the courts more often, but in conversation with one of them upon the subject, some time ago, he said there was no danger because people would not air their vanities in court.

## FLATFOOT: ITS DIAGNOSIS AND TREATMENT

A common cause of disability of the feet, often mistaken for "rheumatism," but easily diagnosed, easily prevented when its causes are recognized and promptly relieved by a simple appliance

By EDWARD A. TRACY, M. D., Boston, Massachusetts

Orthopedic Surgeon to the Mount Sinai Hospital, Boston

**I**N every avocation the feet are of prime importance. Their well-being to the wage earner is a necessity. Most foot-troubles are amenable to treatment, and can be successfully treated by the general practitioner. This I have shown in an article entitled "The Care of the Feet" published in THE AMERICAN JOURNAL OF CLINICAL MEDICINE for June, 1905.

#### *Ease of Making a Correct Diagnosis*

The diagnosis of foot-troubles is comparatively easy, there being little that is obscure in it. There is some excuse for the doctor who is puzzled about an abdominal lesion, for in such cases even very clever men "when in doubt—open the abdomen and find out." Should there be any excuse, however, for us when we allow a patient suffering from flat-foot to swallow

every antirheumatic in the Pharmacopeia, when a moment's observation of our patient's feet would give us a positive diagnosis? Based on this diagnosis we can supply a proper arch support and give our patient immediate relief, converting him from a pessimistic drug consumer into a grateful patient, with respect for the medical profession, one who will sound our praises to the afflicted with whom he mingles. Mind, I say a *proper* arch support, and of such construction that while it restores the arch, it does not by its rigidity interfere with the normal elasticity of the foot.

I am a firm believer in the efficacy of pure drugs—but sooner would "all the perfumes of Araby sweeten the blood-stained hand" of Lady Macbeth, than all the chemicals of nature and of art remove the disability of the pain-producing flatfoot.

The diagnosis of flatfoot is made by inspection. It is an overrefinement of the orthopedist's art to take an impression of the weight-bearing surface of the foot for this purpose. The foot should be examined in the hands, with the patient sitting. The contour of the arch is noted, and then the patient should stand; if flatfoot is present the arch will flatten. The degree of flatfoot present depends upon the amount of flattening of the arch that takes place. The height of the scaphoid-astragular articulation from the floor measures the height of the patient's arch.

Flatfoot is a condition that does not permit of doubtful diagnosis: it is present or it is not. If present, it is readily detected, I repeat, by inspection. Flatfoot is present, however, sometimes without symptoms. I have seen in my hospital service the flattest of flatfeet, without pain being present or the feet being complained of. These cases were of long duration, in Russian emigrants, who came to the hospital for other defects. Of course their gait was awkward.

#### *The Cause of Flatfoot*

What is the cause of flatfoot? The main factor I believe to be weakening of the calf muscles. This muscular weakness is present after the patient had kept the bed for any reason for a few weeks. This observation is important. For, because of it, the alert general practitioner can detect flatfoot in its very incipency, and by appropriate treatment cure it—and thus prevent the chronic condition that is so prevalent. For example, I have seen a patient who was sick in bed for six weeks with acute articular rheumatism with endocardial involvement, when convalescent, complain of pain in the feet when walking. The pain was located in the region of the scaphoid articulations. There was slight depression of this bone in both feet, the patient standing. It was thought to be rheumatism of the feet. There had been no complaint of these articulations when the patient was confined to bed. Arch supports gave immediate relief—which they could not do if rheumatic inflammation was present. It was

a case of acute flatfoot due to muscular weakness.

I have seen many cases of acute flatfoot in convalescents from many diseases, the etiologic factor common to all being an acute sickness that confined the patient to bed for a period of at least ten days and associated with muscular atony, this latter due to disuse, or to the toxins of the disease that confined the patient to bed. From personal observation and careful histories I am firmly convinced that this is the manner in which flatfoot arises in most cases. This being so, our responsibility as practitioners for allowing this infirmity and deformity to occur must be acknowledged, that is, if the deformity can be prevented.

#### *Flatfoot is Easily Corrected*

No infirmity of the body is more easily or certainly prevented—or remedied. A flexible, springy support that approximates the lowering arch to its normal height and keeps it there until convalescence is established and the calf-muscles again resume their natural function of supporters or holders-up of the arch does the work. This support must not be a rigid plate, because the foot arch is elastic, spring-like, and a rigid plate interferes with its function.

Besides inspection, already spoken of in the diagnosis of flatfoot, there are symptoms present that indicate the nature of the trouble. These symptoms are tenderness on pressure being made downward on the scaphoid articulations, pain in the calves, sometimes ascending to the hips and even higher. Sometimes a tired feeling in the legs is the sole complaint. Both the tiredness and the pain is most severe as the day wears on, as a rule both being absent in the morning after the night's rest. On examining the feet of patients with these symptoms, we shall find various degrees of flatfoot. Long-lasting cases have lost considerable of their arches, as is manifest when we examine the feet without weight-bearing, the patient sitting. If on manipulation we can restore a fairly good arch, we shall find treatment by a proper support almost miraculous in its removal of symptoms. If



we have a rigid arch to contend with, relief is slower. In these cases I find a support that is very moderate in height, the best appliance.

The arch of the foot that I have so far spoken of is the main arch of the foot—the instep.

#### *The Anterior Arch of the Foot*

I will say a few words now about the other arch of the foot—the anterior arch. This is the arch that is normally found between the distal ends of the first and fifth metatarsal bones. In the normal foot the metatarsals between the first and fifth do not press against the sole, only the ends of the arch, the first and fifth metatarsals, do that. This anterior arch breaks down from bad shoeing and is secondary to the falling of the instep. In these cases we find a callus on the sole, back of the middle toe, caused by pressure of the distal end of the middle metatarsal. This callus is

generally painful and is diagnostic of the falling of the anterior arch. In some cases there is no callus present, but a metatarsalgia. The arch support I have described is so constructed as to help restore also the anterior arch, and in most cases its application suffices for treatment.

In this brief paper the points worthy of emphasis are the following:

In convalescence from any sickness that has confined the patient to the bed for a period of ten days or more see that a pair of good arch-supports, built on anatomic and physiologic lines, be applied; it will add to the comfort of convalescence, lessen tiring, and absolutely prevent falling of the arch—or flatfoot.

The general practitioner can treat flatfoot successfully by means of the arch-support described. Better results are attained than can be by means of the rigid arch supports that some orthopedists furnish at from fifteen to thirty dollars.

## AN INTERESTING MONSTROSITY

The report of an unusual abnormality  
as found in a newborn babe, which  
lived for ten days after its birth

By JAMES A. DE MOSS, M. D., Thayer, Kansas

**N**ATURE is so constant and perfect in her work that the abnormal is a rarity. The poet sees and describes the beauty of nature and marks her symmetry and loveliness in the lineaments of verse, setting forth her form and likeness as a splendid portrait.

The study of the abnormal more generally belongs to the physician, and he is forced to pass by the beautiful and perfect for the study of the abnormal—nature in distortion; and when possible, apply remedial agencies for normal development.

Human monstrosities are catalogued at some length, but in proportion to babies born they are a rare and infrequent occurrence. So infrequent are nature's failures

to develop and mature the human fetus that the average practitioner meets with but few such cases in a lifetime.

On March 2 the writer attended Mrs. B., for the sixth time, in confinement. All her previous children were well developed. The health of the patient during her last gestation was fairly good, she being able at all times to do her housework and care for her children. Her general appearance indicated a moderate state of innutrition.

In this particular confinement she gave birth to a living child with the following deformities: Utter absence of cerebrum; cleft lip and palate; distal phalanx of left index-finger amputated; from eyebrows to spine backward only a flat plane. Back of

the eyebrows there was a cleft in the scalp, which presumably represented the anterior fontanel, and through this opening of about half or three-fourths of an inch protruded a strip of substance two inches in length, which I presumed to be the meninges of the cerebrum. The pitiable infant lived ten days.

[These cases are fortunately rare, but there are many more of them than most of us imagine, the larger part of them going unreported. For instance, in the Miscellaneous Department of this issue there will be found the report of another somewhat similar case.

While our journal is above everything else practical we shall be glad to have brief reports of such fetal abnormalities from our readers. Tell us briefly just how many of these cases you have seen and give us something of their character. The study of teratology is one which is of peculiar interest to the embryologist, but one which the general practitioner should also know something about. Read Gould's and Pyle's "Curiosities and Abnormalities of Medicine."

But while these things are of interest don't forget *the main thing*—which is to cure or alleviate disease. Above everything send us in experiences, which will help to that end. Will you not do it?—ED.]

## A FURTHER REPORT ON HYOSCINE-MORPHINE

The later experience with this combination, reported after one full year's experience, with the description of an obstetrical case in which its action was ideal

By F. C. BEALS, M. D., Salamanca, New York

SOMETHING more than a year ago I made a report on my use of hyoscine-morphine and cactin tablets for anesthesia, in which I said: "For a number of appendectomies, perineorrhaphies, trachelorrhaphies, etc., two tablets followed by a few whiffs of chloroform gave entire satisfaction. In twelve obstetrical cases (4 instrumental) this anesthetic acted equally well. No bad symptoms occurred except in two cases of labor where two full-strength tablets were given; the children were dumpish and would not nurse until the second day. I regard it as superior to chloroform, especially in labor-cases where there may be a tendency to postpartum hemorrhage."

### *His Opinion Still the Same*

I have no desire to modify this statement after another year's use of this anesthetic; all I can say is, I like it better and better the more I use it, and have had no bad results from it; nor have any occurred in this

part of the country if I can judge by the discussion on my paper read some weeks ago before our county medical society. In my surgical work two tablets an hour and a half apart with the inhalation of a few drops of chloroform have become my usual form of anesthesia. In a recent case of amputation at the shoulder-joint it gave splendid results, less than two drams of chloroform being required for such a serious and long operation.

A recent case of obstetrics is typical of its effects in susceptible cases. A woman about six months pregnant was seized with severe labor-pains, without apparent cause. On my arrival I found the uterine contractions severe, frequent and very distressing. Examination showed the os to be but slightly dilated, with no discharge of blood; so I concluded that abortion could be prevented by immediate arrest of pains and protracted slumber. I therefore gave her one full-strength tablet of hyoscine, morphine and cactin hypodermically, and waited about an

hour when she was sound asleep, but the uterine contractions continued at regular intervals—they were still strong and frequent.

At the end of an hour and a half the pains suddenly ceased and the patient slept quietly on. Then I made a second examination and found that expulsion had occurred; the head of the fetus was at the vulva, and I removed everything by a little manipulation—fetus, placenta and membranes all intact; the pains had been so gentle and the movements of patient so quiet that the am-

niotic sac was unruptured. Further examination showed the uterus to be contracted firmly and with no bleeding. After completing her toilet and getting ready to go home I shook her and spoke loudly to her; she awakened easily and inquired if I thought she would be able to get out of her trouble without any miscarriage! When I told her that her labor was over she was very much astonished; she knew nothing of anything that had occurred later than a few minutes after the hypodermic injection.

## PAROTID ABSCESS DUE TO SALIVARY CALCULUS

The causes and symptomatology of this rather unusual condition, with the description of an illustrative case, which was relieved by operation

By EMORY LANPHEAR, M. D., LL. D., St. Louis, Missouri

Professor of Surgery in the Hippocratean College of Medicine

**C**ALCULI in Steno's duct are not very uncommon, the lime of a deficient salivary secretion of the parotid gland being deposited upon the floor of the duct and accumulating there until a stone as large as an almond may result. Such calculi can usually be expressed by propulsion by fingers, or by enlarging the opening of the duct (opposite the second molar tooth) and crushing the deposit, or by cutting down upon the mass and scooping it out with a Volkmann's spoon.

As a rule the flow of saliva is not completely shut off by these calcareous deposits, but rarely occlusion of the duct occurs and then an inflammation of the parotid gland is almost certain to follow as the mouth is always the home of myriads of bacteria.

In rarest instances the salivary retention is not followed by inflammation, in which cases malignant disease of the gland may be the diagnosis, and a grave prognosis given, whereas the trouble is very simple and easy of cure if recognized.

In most of the cases of occlusion the symptoms of inflammation follow promptly on cessation of the flow: distension of the duct causes pain and swelling and in a few hours

chill and fever follow; and if the existence of calculus in the duct is not suspected "mumps" may be the opinion of the attendant, as at first the symptoms indicate a simple parotiditis. But the recurrence of chill, the persistence of fever, the tongue of sepsis and finally the appearance of fluctuation cause even the careless practitioner to recognize abscess of the parotid as the pathological condition present; and careful examination reveals the local cause.

Prompt opening and drainage through the mouth, with removal of the calculus, quickly restores the patient to health; neglected cases go on to sepsis and may terminate fatally.

Dr. Y., age 48, was admitted to St. Mary's Infirmary April 19, 1908, with high fever, intense pain in face, huge swelling of cheek and general evidence of sepsis. Two years ago he had occlusion of Steno's duct from a salivary concretion, relieved by dilation of the orifice of the duct by probe followed by digital expression. About ten days ago the occlusion became complete, the existence of another lime-formation having been known for some months but not treated as it occasioned no discomfort. The closure of the duct was followed by marked swelling

of the cheek and in a few hours by chill and fever. The face and parotid continued to swell and the chill and fever recurred. At admission, the general condition was bad, from sepsis, and fluctuation pronounced over the lower part of the left parotid.

Under H-M-C anesthesia (plus a little chloroform) the abscess was opened from

within the mouth, the stone removed and the cavity packed with gauze. Convalescence was immediate, though there was much pain and induration in the gland for several days; and a slight purulent discharge still continues. But a day or two more of delay in this case undoubtedly would have led to a fatal termination from general sepsis.

## CHILDBIRTH AT THE AGE OF NINE

The report of a remarkable case of sexual precocity, occurring in a negro child and presenting features of unique interest to the obstetrician and anthropologist

By V. I. PITTMAN, M. D., Cedaretta, Mississippi

I WAS called, March 16, 1908, in the morning, to see Estelle Pryor, colored. I found her in labor and the case progressing slowly. The presentation was L.



A Picture of the Child-Mother Taken Four Days Before Delivery

O. A. On account of the extreme youth of the patient I apprehended trouble and

therefore called Drs. J. T. C. and C. J. Pittman in consultation, with whose assistance I delivered her of a seven-pound boy-baby, without finding it necessary to use instruments.

Labor was normal and of fourteen hours' duration. There was very slight laceration of the soft parts; in fact, the girl did as well as any primipara I ever attended.

The most remarkable thing about this case was the age of the girl-mother. She was only a little more than nine years of age, having been born February 20, 1899; this made her nine years and twenty-four days old at the time of giving birth to her child. She is only 37½ inches high and weighs 75 pounds.

The remarkable sexual precocity of the child is shown by the fact that she menstruated first when about one year old; her periods were perfectly regular and normal up to the time she became pregnant (at age of about 8 years, 3 months). She was well developed in every particular.

She was up in ten days, and at this date (May 1) the girl-mother and babe are doing well and the mother is giving more milk than the babe can appropriate.

Of the accompanying pictures, one was made four hours before delivery, the other three weeks afterward.



The Young Mother and Her Three-Weeks-Old Babe

The mother of this girl is forty-three years old, weighs 125 pounds, stature low

and form slender. And by the way, she had a child just one month old when her girl gave birth to hers. The father is fifty years of age, weighs about 150 pounds and is tall and slender. The couple have had twelve children, of whom five are living. The first was born when the mother was fourteen. The health of all the family is good and there is no hereditary taint.

This premature development has not manifested itself in any of the brothers and sisters of this little girl. She has a sister fourteen years old who has never menstruated. The little girl states that her own father is the father of her child.

[We have been unable, as yet, to find any record of childbirth at such an early age as this. The writer was once called to attend a young girl about to give birth to a child at the age of eleven years and ten months, and thought that extremely precocious. Can anyone match or approach Dr. Pittman's case?—ED.]

## A CASE OF PROSTATECTOMY

Successful operation on a patient eighty-two years of age, illustrating some operative points and that it is "never too late to mend;" also the attitude of some surgeons toward colleagues, substantiating statements made by Dr. Gould

By J. D. ELY, M. D., Toledo, Ohio

**S**AMUEL MONTGOMERY, aged eighty-two years on January 30, 1908, was the victim of retention of urine for which I was called to relieve him November 26, 1907. He had been a sufferer in consequence of prostatic trouble for many years, and experienced all of the suffering and trials incident to recurring retention and inflammation until he had not only become familiar with its varied manifestations and how to relieve them, but he had the most complete outfit of catheters and appliances for that purpose it has been my experience to see in the possession of any patient.

A gun-metal prostatic catheter of special curve, procured for his use by an attendant

of more than usual ingenuity and skill, was often the means, when others failed, of relieving and kept him fairly comfortable for some time before the occasion on which I was called.

### *The Condition After Operation*

The old gentleman was much weakened as a result of an operation for cataract undergone at the hospital and from which he had just returned home.

I drew the urine without very unusual difficulty the first time, but at the second trial, a few hours later, the irritation and difficulties had so increased that it was decided to return the patient to the hospital.

Some ten days there resulted in improvement, but not sufficient to make the condition of the patient at all promising for operation, and, as he was much dissatisfied there, he was returned to his home, able to get along fairly well without use of catheter for a short time.

He walked out and slight chilling of the surface resulted in return of trouble to an extent that operation was the only means considered possible to save his life, and



DR. J. D. ELY

without which, no doubt, he would have succumbed in a short time. The patient was not only willing but anxious to take the chance of operation, preferring it to continued suffering for an hour longer even, but refused to return to the hospital.

Under protest, and with little hope, the surgeon, Dr. John S. Pyle, was prevailed upon to operate at the house, two rooms of which were most efficiently prepared for it by Miss Mary Glass, a professional nurse. A bedroom in the southeast corner of the house proved to be as perfect for operating in as any private house could afford, and the day and hour chosen were most favorable. Dr. Pyle was assisted in the operation by Paul Hohly, the nurse, and myself, and the

anesthetic, which was C. E. mixture, was administered by Dr. E. I. McKesson.

Adopting the Pyle method, an elliptical incision was made through the skin, and attention is called to its advantages over the modified, V-shaped, used and recommended by some surgeons, in that it requires one incision of the skin instead of two, as does the V-incision; and so far as exposure of the field of operation is concerned, they are practically the same, consequently no claim of advantage over the elliptical or any originality should or will be claimed by any fair-minded operator.

#### *Advantages of the Pyle Operation*

In the operation of Dr. Pyle the prostate is not only most easily reached and removed, but the urethra is not opened, something most desirable to avoid, and which may most likely be by using a sound in the urethra for guide during operation as recommended by the Doctor and successfully used, as usual, in this, one of the most difficult cases.

Our patient was returned to bed, all considered, in a surprisingly good condition following the operation, and he rallied from the shock remarkably well.

The fight for his life however was no less strenuous after, and the credit for success following is, perhaps, quite as much due to the efficient care of Miss Glass, the professional nurse, and her assistant, Miss Minnie Lloyd, a practical nurse, as to the painstaking work of the surgical attendants who cheerfully accord to them, and all helpful assistants, their due.

The condition of the bladder and parts about included in the wound of operation, in this case, were such as to require irrigation and drainage to prevent and overcome sepsis. Recovery was uninterrupted and perfect, and as rapid as could be expected. Mr. Montgomery is now in excellent condition, has recently taken walks of a mile or more, and is going about wherever he pleases, unassisted, as usual.

#### *The Operation and the Operator*

Finally, regarding the operation of prostatectomy, and the operator in this case particularly, I offer a few words.

The evidence in favor of the operation of prostatectomy, even at advanced age, is now conclusive, and the route of choice, with just enough exceptions to prove the rule, is the perineal. This is obviously the best, as no important blood-vessels and nerves are involved, and the after-care of the case is usually the most satisfactory. A recent report in *The Journal of the American Medical Association* of two thousand cases of successful operations, without death, by Dr. Young, is notable and ample proof.

Credit for this method of removal of the prostate gland through the perineum used by him and others, and which they unjustly fail to acknowledge in their writings, is undoubtedly due to Dr. John S. Pyle, as the evidence which I have examined proves beyond question, I believe.

Please observe that Dr. Pyle devised and executed this, then new, method of removing the prostate gland, April 6, 1892, and first reported the same in *The Medical Record* of August 6, 1892, page 147. Further particulars of his operation are set forth by him in *The Philadelphia Journal* of April 1, 1899, many reprints of which have been distributed. Other evidence relative to the attitude of well-known surgeons in relation to Dr. Pyle's claims are also shown in *The Journal of the American Medical Association* for August 10, 1901, to which I refer those particularly interested in the subject.

I call attention to the matter here again, not because I feel that Dr. Pyle is entitled to particular recognition, much less praise, above others who, in common with him, have acquired knowledge which enables them to record for our benefit, but, rather, that he may not be deprived of that personal just recognition which custom has long accorded to the most worthy.

I offer the facts here stated as illustration of the practice of some surgeons to take to themselves credit where credit is not due, and that has made countless numbers of their more modest but most deserving colleagues mourn and the rank and file blush with shame for.

The immaterial change in operating adopted, set down and advocated by the usurpers as a subterfuge to enable them to appropriate credit due the originator, is a most disreputable practice, and should be exposed and objected to by the profession so that it will be abandoned by all writers, and particularly those who assume the authorship of textbooks and set themselves up as teachers and leaders.

Either no mention of the name of the originator or improver of an operation should be made, or else every one should appear with full credit.

Let us be just and generous if we must be hero worshipers as well as worshipers of the deed and truth.

## ❖ SURGICAL THERAPEUTICS ❖

### FRACTURE OF UPPER END OF HUMERUS

Sometimes in fractures of the upper end of the humerus it is quite impossible to restore the bone to the normal by any sort of manipulation; in others, oblique in character, maintenance in good position seems unattainable by ordinary means. In such cases it is best to cut down upon the fracture, restore the parts to their normal position and retain them there by one of two means: (1) if the fragments do not show

much tendency to displacement after correction of deformity, suturing the torn periosteum and fascia with 20-day catgut will suffice; (2) if the parts slip about persistently, ivory pegs may be used or the bones may be drilled and fastened by catgut, with a plaster-of-paris dressing.

### DUPUYTREN'S CONTRACTION

The excellent effects obtainable from thiosinamin on strictures has led to its adoption in the treatment of that peculiar,

and somewhat analogous, contraction of the tendons of the finger known as Dupuytren's contraction. Most remarkable results are reported from the injection of a 10-percent watery solution of thiosinamin together with the application of hot air for an hour each day, with massage.

#### CLEFT PALATE

When the fissure in the roof of the mouth is not very large it is better closed while the child is quite young; but if wide, it is better to wait at least until talking is well begun. But in any event it ought not to be attempted unless there is a fair likelihood of success. It should be done only by those having acquired special skill in nasopharyngeal and oral surgery. When it is probable that several operations may be necessary the parents or patient should be so informed. The operation should be done as early as possible. In the difficult adolescent cases the operation, after a preliminary tracheotomy, may be preferable. There are two reasons for attempting to close a cleft palate: (1) to improve the general health of the patient, and (2) to increase the efficiency of the faculty of speech. The general health of the patient is benefited by improving the hygiene of the nasopharynx and the oral cavity, and by improving the general morale of the patient.

#### REMOVAL OF GOITER

Unless the patient is very weak or the tumor unusually large there is but little danger from removal of bronchocele, which may best be accomplished under a mixed anesthesia: one surgical dose of hyoscine-morphine-cactin being given one hour before operation (two doses may be used except in the worst exophthalmic cases), and then locally the following solution: beta-eucaine, 0.2 Gram; sodium chloride, 0.9 Gram; adrenalin solution, 0.5 Gram; distilled water to 100 Cc. The entire area of operation is injected within the skin, the resulting edema soon disappearing. The incision is that of Kocher, the tumor

being enucleated from its capsule. Drainage is seldom used, bleeding is slight, and union by first intention has been the rule. Sterilized catgut is preferable for ligatures and sutures; and operation must be performed with rubber gloves if possible—or the wound not touched by fingers.

#### LOOSE CARTILAGE IN THE KNEE

Painful knee is often the result of a peculiar form of accident, not regarded at the time of injury as of much importance. The internal semilunar cartilage is more prone to injury than any other part of this joint, and especially its anterior portion, which may be torn from its tibial attachment or from the transverse ligament. Having been detached, it is liable at any time to be nipped between femur and tibia. The detachment is usually the result of violence, which causes an acute pain (and the limb remains slightly flexed) until the cartilage slips back into place. Subsequent displacements may occur from comparatively slight causes, and with them may come attacks of acute or subacute synovitis which render the joint a source of much discomfort. Treatment consists in careful reduction of the cartilage (under anesthesia if necessary) at time of injury, provided it is recognized; and if this is not successful, the cartilage ought to be removed by incision. Removal of the cartilage does not interfere with the utility of the joint providing absolute asepsis is maintained, no blood left behind, and passive motion instituted early.

#### LEUKEMIA

Under this name two distinct conditions are grouped: lymphatic leukemia and splenomyelogenous leukemia, each of importance in surgery, particularly from a diagnostic standpoint. The disease is essentially one of the blood and can only be recognized, early, by blood examination. In lymphatic leukemia there is a marked increase in the lymphocytes (the lymph-cells: those leukocytes which are small and have large nuclei and a very small amount



of protoplasm). The average leukocyte-count in this variety is 300,000, 90 percent of them lymphocytes; nucleated forms being rare. In the splenomyelogenous variety there appears in the blood-current a peculiar leukocyte normally present in bone-marrow but not natural to the general circulation; vast numbers of these being forced into the circulation; the leukocyte-current runs about 45,000, 30 percent being myelocytes; nucleated forms are numerous; and the amount of hemoglobin is reduced. The amount of reduction in the red cells depends upon the stage of the disease.

#### ATRESIA OF BILE-DUCT

It must not be forgotten that a narrowing of the common bile-duct may be a congenital condition. Such children have jaundice almost from birth. At first the weight may increase but after a few weeks (or months at the latest) it decreases until the baby becomes much emaciated, although the food seems to be digested. There is usually purpura, and decomposed blood may be noted in the stools from time to time. Bile-pigment may be found in the urine. If infantile jaundice does not yield quickly to calomel, succinate of sodium and laxatives, cholecystostomy should be performed.

#### PYLORIC OBSTRUCTION FROM CANCER

The passage of food from the stomach into the duodenum may be obstructed as a consequence of benign and malignant tumors of the pyloric portion of the stomach. Benign tumors in this region are so infrequent that they need not be considered. Pyloric obstruction from carcinoma is of frequent occurrence and gives its most marked symptoms late in the disease. The leading symptoms are stagnation and retention of food, with vomiting occurring every twenty-four to forty-eight hours, owing to the inability of the contents to escape through the pylorus; but the most prominent symptom is the severe cramps engendered by the efforts of the stomach to

overcome the resistance. Liquids are better borne than solids. A glass and a half of water in the earlier stage will leave the stomach in two or three hours, while a meal of solids (even though absorbable by the stomach) will be retained five to eight hours. When the disease is too far advanced for curative operation, which is usually the case when the tumor has grown to this extent, a gastrojejunostomy should be urged, not so much to prolong life as to make the patient comfortable; but it usually also adds several months to life.

#### ADENOMA

This tumor originates in glandular epithelium and conforms in its histologic structure with glandular tissue. When there is an excessive development of the connective tissue the resultant growth is called an adenofibroma. If it undergoes cancerous degeneration it is then designated adenocarcinoma. On account of the danger of this latter change the tumors should be removed early, particularly if they show a tendency to grow rapidly.

#### TRACHOMA

Opinion of ophthalmic surgeons differ as to the best treatment of this most important condition, but the following may be said to represent the best plan to be followed by the family doctor under whose care the most of these patients come; and who must not mistake it for vernal conjunctivitis. In a recent case there are three indications: (a) to reduce excessive excretion, (b) to remove the trachoma-granules, (c) to prevent distortion of the lid with accompanying corneal complications.

(a) Argyrol here, best results. The patient must irrigate the conjunctival sac every 3 or 4 hours with saturated solution of boric acid, and at its conclusion have one minim of a 25-percent solution of argyrol dropped into the eye. This solution should be freshly prepared at least once a week. In the late cases, with "raw-meat" lids, an astringent must be added: the affected sur-

face should be lightly touched daily with strong solution of nitrate of silver, alum or sulphate of zinc—always by the doctor—and the other treatment continued at home.

(b) Removal of trachoma-granules must be effected with as little destruction of conjunctiva as possible. They may be expressed by some of the specially devised trachoma-forceps, under local anesthesia, if few in number; but if many are present, it is best to anesthetize the patient and carefully remove every one leisurely, with special attention to the retrotarsal folds and the angles of the eye where some are apt to be overlooked. Some authorities apply solution of copper sulphate in 10-percent solution (about 40 grains to the ounce) or 1 in 500 bichloride solution immediately after extraction of the granules. Cold compresses and a mild opiate control the subsequent inflammation and pain. In a few days topical applications by the doctor and irrigation at home may be resumed. If improvement is not satisfactory the mild treatment may be superseded by daily touching with sulphate of copper and the substitution of one drop of a solution of tannic acid in glycerin (10 grains to the ounce) for the argyrol.

(c) This indication is met by early operation and perseverance in after-treatment. Patients are prone to discontinue treatment as soon as pain is relieved, but to secure good results the measures here outlined must be continued for weeks and sometimes months until a perfectly healthy conjunctiva is secured. When it is absolutely impossible for patients to see the doctor more than a few days after operation, Prince's method may be followed: Give to each patient a 2-dram vial of a 10-percent solution of sulphate of copper in glycerin, with the following directions: "Dilute one drop in twenty drops of water. Use freely in the eyes four times a day; increase the strength. Make fresh each time."

In his experience it is best to begin with one drop of this solution in twenty drops of water, and to use it from four to six times a day. The patient is told to decrease the water as he finds he can tolerate the solution,

or to increase the amount of water if the solution proves too irritating. Some patients do not tolerate the treatment very well, but in most patients it is satisfactory and has often effected permanent cures. People must be informed that the disease is contagious through the conjunctival secretions and warned to take proper precautions.

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#### FOREIGN BODY IN CORNEA

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Quite frequently a small piece of cinder, rock or of dirt is so driven into the superficial layers of the cornea as to defy removal by fine tweezers; and of course it cannot be removed by electromagnet as can a fragment of iron or steel. If the cornea is well anesthetized with cocaine it is often possible to extract the foreign body by simply pressing lightly with the flat end of a common wooden toothpick, by the side of the object. If it cannot be thus pressed out it must be dug out with a sharp spud.

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#### SUCKING THE TRACHEOTOMY-WOUND

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In some textbooks there will be found the advice for the surgeon to apply his mouth to the cut and suck out the wound, or to blow in it after removal of blood and mucus if the patient does not breathe. Such directions are hideous—for the operator is almost certain to become infected by this dangerous procedure. The immediate dangers of a tracheotomy always seem greater than they really are. Even with cessation of breathing during the operation, life may be nearly always restored by opening the trachea with speed, and then, without trying to introduce a tube, doing artificial respiration while the edges of the trachea are held apart by means of two hemostatic forceps, one being caught upon tracheal tissue on each side of the cut. Blood can be prevented from clogging up the trachea by making the opening in it larger than needed for the tube, and by bringing it up to the edges of the skin incision at once. Any membrane blocking the tube can be removed with a little cotton on a hemostat

or can be picked out with a pair of forceps. After breathing is free and easy the tube can be inserted.

### OPERATIVE TREATMENT OF FRACTURES

J. A. Kelly, of New York, is an enthusiastic advocate of operative interference in fractures. He declares that in all cases in which marked comminution of the fragments is present, and when reduction is impossible, in oblique and spiral fractures of the bones of the extremities, operative inter-

vention is justified. Many of the deformities, pseudarthrosis and loss of function which seem to follow fractures will thus, in most cases, be obviated. The unsightly deformities which so seriously destroy the usefulness of the part and predispose to refracture will be prevented. Fractures complicated by severe injury to adjacent structures urgently demand operation. Under this heading may be included fractures in which pressure is brought to bear on neighboring viscera, nerves and blood-vessels, fractures associated with dislocations, and fractures involving joints.

## GYNECOLOGICAL THERAPEUTICS

### RUPTURE OF UTERUS

It is now pretty well agreed that the best treatment of the uterus during labor is to complete delivery and pack the uterus with sterile gauze, rather than to make any attempt at abdominal section and closure; for statistics show that this conservative treatment yields just as good results as the operative, save in the hands of the most expert operators. Whenever operation is required, total abdominal hysterectomy or supravaginal amputation has given the best results.

### CURE OF ECTOPIC PREGNANCY

In safe hands every woman with extra-uterine pregnancy should be saved by operation; the trouble is that the difficulty is not recognized by many physicians, even after rupture has occurred—many patients being curetted or treated for threatened abortion. Harris gives the following rule for its recognition: When any woman between puberty and the menopause, who has menstruated regularly and painlessly, goes 4, 5, 6, 8, 10, 15 or 18 days over the time at which menstruation is due, sees blood in the vagina differing in color, quality, quantity or continuance from her usual

menstrual flow, and has pains (generally severe) on one side of the pelvis or the other, or possibly in the hypogastric region, ectopic gestation may be presumed.

Blood from the uterus as associated with ectopic pregnancy has a peculiar, slippery feel, and the pains also differ markedly from those of ordinary dysmenorrhea. The pulse and temperature, except in cases of excessive bleeding, are not likely to be affected in the nontragic stage. The tragic state is ushered in by severer pains, pallor, weak and rapid pulse, lowered temperature, fainting, generally vomiting and restlessness, and sometimes a lethargic condition from which the patient can be roused. The differential diagnosis from abortion, salpingitis, polypus, uterine cancer, ovarian cyst with twisted pedicle, and intrauterine pregnancy with metrorrhagia is not difficult as a rule; but there is great importance of thorough and accurate history-taking in these cases, especially as to the character of earlier menstruations for a number of months preceding the symptoms. As soon as a diagnosis is made, operation is indicated. In dealing with women in the nontragic stage, the advice to them should be governed by the consideration that from one-half to two-thirds of all cases of ectopic gestation, uninfluenced by operation, eventuate in death, but that

with prompt and proper operation fully ninety-nine percent of the patients ought to recover.

### DYSMENORRHEAL NEURALGIA

Many women suffer from a kind of lumbago—lumbar neuralgia—during the menstrual period, sometimes without any associated dysmenorrhea recognizable as such, but generally accompanied by more or less pain referred to ovary, uterus or both. The following will be found efficacious in such cases:

Ichthyoli . . . . .	10.0	(drs. 2 1-2)
Spt. chloroformi. . .	16.0	(oz. 1-2)
Spt. camphoræ. . .	16.0	(oz. 1-2)
Alcoholis . . . . .	32.0	(oz. 1 )

Mix: This is to be painted locally over the lumbar region and may be associated with warm baths and massage to the loins, buttocks and thighs.

### FIBROIDS OF UTERUS

Long experience shows that fibroids occur in about 20 percent of all women who reach 35 years of age. They are practically never seen before puberty, nor do they appear primarily subsequent to the menopause.

### VULVOVAGINITIS OF CHILDHOOD

In a late article Joseph Tabor Johnson quotes Jacobi and Currier as having proved that the "vulvovaginitis of little girls" is generally of gonorrheal origin and is responsible for the frequent retardation and even prevention of the development of the female reproductive organs. The effect in adult life is to render them sufferers from amenorrhea and dysmenorrhea and often to make them sterile. It is a frequent and troublesome institutional disease, originating in gonorrheal infection, but spreading in other ways, of course, than by sexual connection. Johnson says that gonorrhea may be considered to have fairly earned the title of the "chief moral and physical pest of our age," and in contradistinction to tuberculosis,

might be called "the great black plague." The lesson is instantly and thoroughly to treat every vulvitis of children as an acute gonorrheal infection. By prompt and careful treatment it will be possible in many cases to prevent invasion of the internal organs of generation.

### LEUCORRHEA OF PREGNANCY

Some women are troubled during the later months of pregnancy with excessive vaginal secretion, amounting in most cases to a catarrh. Every such woman should be examined for gonorrhea—secretions from the os and the urethra to be subjected to microscopic test—because many such leucorrhæas are due to chronic infection with the gonococcus; and when so produced, will give the baby gonorrheal ophthalmia unless Credé's 10-percent solution of nitrate of silver be instilled in the child's eyes as soon as delivery is effected. In other cases the leucorrhæa seems to depend upon the excessive venous congestion, which is sometimes so great as to cause marked edema of the vulva during the later months of gestation.

When caused by Neisser's diplococcus, the most energetic measures must be instituted to eradicate the infection before labor occurs, else puerperal sepsis of dangerous character will almost inevitably follow delivery; special attention being directed to the urethra and to the cervix (the two chief foci of chronic infection), though the glands of Bartholin must not be neglected, the vagina being but rarely the site of a gonorrheal inflammation. When found to be caused by engorgement the leucorrhæa is best cured by rest in bed supplemented by vaginal douches of a solution of chlorate of potassium or of alum, to be followed in an hour or two by plain water. These douches should invariably be taken in the recumbent posture.

### SALPINGITIS IN CHILDREN

Fortunately gonorrhea of childhood—so much more frequent than generally believed, notably among inmates of charitable institutions—does not, as a rule, implicate the

cervix and mucous membranes above it. But it must be conceded that many causes of peritonitis of childhood are due to gonococcal infection. The acute salpingitis of childhood is characterized, almost always, by a very sudden onset with severe abdominal pain and vomiting, the temperature rising, the pulse becoming small and rapid, the abdomen tense and bloated. The patients become rapidly worse and present an apathetic behavior. Cyanosis is frequently noted. When the abdominal cavity is opened in such cases it is found to be filled with a thin pus, often peculiarly tough and fibrinous. The intestinal cords are covered throughout with thick shreds of fibrin; there never is a fetid odor to the pus as is the case when the trouble originates in the appendix. The fimbria may appear either intact or reddened and swollen; pus can be evacuated by pressure upon the tubes.

The prognosis is unfavorable after peritonitis has arisen. The disease seems to be of great clinical importance, for among the 56 male patients under 10 years of age who were operated upon by Riedel for appendicitis there were eight children with peritonitis originating from the genital organs, or 14 percent. Altogether 8 patients came to operation and 7 came to autopsy. In most of these cases the gonococci and the staphylococci had reduced the abdominal cavity by way of the genital organs, without giving rise to inflammatory symptoms in the region of the vagina or the uterus. The mode of progress could not be demonstrated in a single instance. Neither masturbation nor a vaginal discharge were discoverable. The other conditions with which it may be confused are acute appendicitis, abdominal tuberculosis, acute thrombosis of the portal vein and even that rare condition, acute suppuration of abdominal echinococcus cysts, must be taken into consideration.

#### CANCER OF CERVIX AFTER HYSTECTOMY

A powerful argument in favor of removal of the entire uterus instead of leaving the

cervix, when hysterectomy is indicated, is a report by Burckhard of eighteen cases of cancer of the cervical stump after supra-vaginal amputation. Even such a comparatively small proportion as this is important in view of the facts that panhysterectomy is no more dangerous than amputation above the cervix and that patients recover much more promptly after total hysterectomy. The shortening of the vagina is of slight import; and the weakening of the pelvic roof purely theoretical.

#### RETROVERSION DUE TO ABSENCE OF ROUND LIGAMENT

When it is found that the round ligaments have never existed or they are so fragile as to afford no support to the uterus (conditions not at all infrequent) ventral fixation still should not be practised save in women past the menopause. The operation of selection then is: Enlarge the incision sufficiently to permit delivery of the tube and ovary; catch a firm hold on the relaxed broad ligament fully an inch below the tube, with hemostatic forceps; scarify the anterior surface of the ligament over an area of about one square inch; pass forceps through rectus and peritoneum just as to catch the round ligament in the operation of shortening; grasp the denuded area of peritoneum, loosening the first forceps, drop ovary and tube into pelvis and pull the fold of broad ligament through the rectus muscle, and stitch it firmly with two or three chromic catgut stitches. This procedure is to be repeated upon the opposite side and the wound closed as in any other operation.

#### LEUCOCYTE-COUNT IN GYNECOLOGY

Albrecht has lately called attention to the importance of blood examinations in gynecological work, reaching these conclusions: (1) In acute pelvic peritonitis the leukocyte-count is a valuable auxiliary for determining the severity of the infection and its gradual subsidence or its localization and the formation of abscess. (2) In the presence of inflammatory swellings (pyosalpinx, parame-

tritis exudativa, hyperleukocytosis (exceeding 15,000) points to the probability of a purulent process, especially one of long duration. (3) After the opening of abscesses a continued hyperleukocytosis indicates pus-retention and the necessity for better drainage. (4) The absence of leukocytosis is of some aid in the differential diagnosis between inflammatory and noninflammatory tumors of the adnexa. (5) In the mild cases of puerperal fever (staphylococcus infection) a relatively low hyperleukocytosis is found; while in severe cases of sepsis and pyemia (streptococcus infection) the leukocyte count is low as compared with the degree of infection; it is an unfavorable sign from a prognostic standpoint. In septic conditions following abortion the severity of the infection is generally indicated by the degree of hyperleukocytosis. In tuberculosis of the peritoneum the leukocyte-count is not materially increased.

#### POLYMASTIA

Supernumerary mammary glands are now regarded as being decidedly related to tuber-

culous disease, twice as many patients with this peculiar conformation having pulmonary disease as those who have not. The condition is not very common in Europe or America but is said to be very frequently met among the Japanese, and nearly as often among Malays.

#### EFFECT OF MORPHINE UPON THE SEXUAL LIFE OF WOMEN

Morphine acts differently upon some women than upon others, when taken habitually. At the outset it often increases sexual feeling, but after a time all passion disappears and menstruation becomes scanty and sometimes stops altogether. But that it is justifiable to create the morphine-habit in order to check menorrhagia, as proposed by some recent French authors, is the height of absurdity, particularly for fibromata which can so easily be extirpated by a skilful operator. In cancer, however, too far advanced for cure, it is the duty of the doctor to insist upon the patient's taking enough morphine to relieve pain completely, regardless of the amount required.

## GENITOURINARY THERAPEUTICS

#### PROSTATIC CONCRETIONS

Some enlarged prostates contain concretions. Thompson declares that in calculus of the prostate the physician has an exceptional opportunity of demonstrating that "an ounce of prevention is better than the pound of cure;" for while some therapy of this process is curative yet the results are to be looked for only by the administration of prophylactic measures. No matter to what stage the process has developed, three essential facts must be borne in mind: (1) Obstruction to the exit of the gland's secretion; (2) consequent retention; (3) persistent alkalinity of the urine. One is likely to find phosphatic, alkaline, fetid urine, and more or less bacteria. In order to correct these,

two methods of treatment suggest themselves: internal and local. The first demands an agent capable of rendering the renal secretion acid, sterile, antiseptic—an agent which will destroy every possible source of irritation and so preserve the urine as to prevent all danger during the act of micturition; the second includes whatever will serve the physician in overcoming obstruction and in eliminating the excessive product from which the concretions are formed. Formaldehyde-products have found the most general favor.

But in cases where an assured continuous antiseptic reaction is desirable, however, they prove disappointing, on account of the small amount of the formaldehyde set free in the bladder; furthermore when there is fetid, strongly alkaline urine, they fail to

exert anything like the necessary therapeutic effect on the reaction. "The only preparation capable of liberating a sufficient amount of formaldehyde in the urinary tract, as well as of exerting the proper degree of acidity, is what may be called a reinforced hexamethylenetetramin, formed by the addition of anhydromethylenecitric acid to the latter. By reason of this acid larger quantities of formaldehyde are set free than when hexamethylenetetramin is employed alone; furthermore, when the latter unites in the renal tract with a strongly alkaline urine such relatively small quantities of the formaldehyde appear to separate that one is scarcely able to detect it in the urine.

This reinforced hexamethylenetetramin is readily soluble in water, palatable, and when given in doses of 10 to 15 grains diluted, will be found to produce a marked change in the urine within an hour. In order to remove the retained product and to overcome obstruction of the ejaculatory ducts, no form of treatment will bear comparison with massage. Unfortunately, however, owing to the insidious development of this process, the remedy is limited in its employment. But during the incipient stage, should this manoeuvre not prove irritating, it can be relied upon invariably to remove the locked-up product which is the direct cause of the calculus-formation. Each prostatic lobe should be treated gently and cautiously once a week, and the length as well as the intensity of the manipulation by the index fingers must be determined by those conditions which experience alone enables one to infer from an examination of the gland itself.

#### INTRAVENOUS INJECTIONS IN SYPHILIS

Lydston claims that by the intravenous injection of mercury one may accomplish in forty-eight hours that which sometimes requires weeks to secure by the older methods. If syphilis be, indeed, due to the presence in the blood of some organism like the *filaria sanguinis hominis* (the cause of elephantiasis), and mercury possesses the power of destroying it just as quinine kills the plasmodium

malariae, the problem of perfect and immediate cure of syphilis would seem to be solved. From the trials thus far made the method seems to be devoid of danger, if properly carried out. Mercuric chloride is used, 15 drops of a 2-percent solution being injected into the median basilic, median cephalic or other vein around which a tourniquet can be placed. It is claimed that when the entire dosage is accurately placed within the lumen of the vein no local reaction whatever will occur, providing the tourniquet be moved from the arm after the insertion of the needle into the vein and before the discharge of the mercurial solution has begun; if not, the vein between point of injection and the tourniquet will be cauterized. This treatment is advocated especially in malignant cases to prevent lesions which seriously menace the integrity of the nervous system or viscera.

#### SOME POINTS ON THE HEREDITY OF SYPHILIS

If those who tell us to follow established authorities would read the periodical literature of the world carefully they would perhaps become less conceited and less strenuous in their advocacy of submission to authority. For almost every day we can see some new old-established notion, some new "definitely" decided point go to smash. Questions which were considered to be decided beyond peradventure are seen to have been decided erroneously and the most strongly established canons fall under the ax of the iconoclastic investigator.

In a paper read before the recent meeting of the International Dermatologic Congress, Prof. R. W. Taylor gives some staggering blows to our established postulates on the subject of hereditary syphilis. He first enumerates the accepted canons of belief on the subject, which are as follows:

1. Hereditary syphilis is peculiar to and generally limited to the period of first infancy. In bad cases the child is killed outright quite early.
2. The absence of general manifestations at birth or in the first years of life warrants

the assumption that the child has not been infected.

3. Early treatment in default of symptoms is not contraindicated, but is not urgently essential.

4. In many unexplained cases spontaneous involution of the diathesis may occur quite early.

5. Seeming immunity and absence of lesions in very early and infantile life warrant the belief that the child has escaped infection.

6. The disease may be cured by active treatment, and thereafter nothing is to be feared.

7. In the majority of cases the disease is exanthematic and only attacks the superficialities of the body.

8. Visceral, osseous, and cerebrospinal manifestations are indicative of malignant development.

9. Late lesions are very exceptional, and their appearance (without the primordial outbreak) at later periods is rarely seen.

Prof. Taylor then proceeds to state that the ideas contained in the foregoing postulates are largely visionary and dangerously misleading. Such doctrines should no longer hold sway. It is time to appreciate fully the gravity of hereditary syphilis in all instances and only to accept established facts concerning it.

The following summary of conclusions is warranted by up-to-date observations, studies, and results:

1. The absence of very early manifestations in heredosyphilis is no criterion that the infant is not infected. Spontaneous involution of the diathesis is most rare, and can never be asserted. It is not a haphazard accident.

2. In many cases the early exanthematic manifestations may be wanting, but later on specific or dystrophic lesions may show themselves.

3. Treatment of the infected infant should always be promptly begun and persisted in as sedulously as in the adult acquired disease.

4. Age and treatment tend to cure the child.

5. The view that inherited syphilis is at first superficial and later becomes deep and visceral is false, since the whole organism is involved from very early life.

6. Syphilis hereditaria tarda is not exceptional; it may occur at about the eighth and twelfth years, and even earlier, and frequently is encountered at all periods up to the thirteenth year of life, and perhaps later.

7. The opinion that the birth of one or several heredosyphilitic infants is invariably by the procreation of other and later infected children or by constant miscarriages, and that such a mother may become permanently sterile is not warranted by facts, since luetic mothers may give issue to several infected children and by means of active, prolonged treatment and by the lapse of time may be so relieved or cured as to enable them to give birth to seemingly untainted offspring. Such a result is obtainable in most cases if proper care is exercised.

#### ATROPHY OF TESTICLE AFTER PAROTITIS

That inflammation of the testicle often accompanies parotitis, with consequent sterility, is well known; but that atrophy of the testicle follows is not so generally understood. The reason is that the atrophy does not occur immediately but is preceded for several months by an abnormally soft consistence of the testicle. As atrophy takes place so comparatively late it often escapes the attention of the physician. If the atrophy only affects one testicle, as is commonly the case, the effect upon sterility is scarcely probable. In all cases of orchitis complicating parotitis, atrophy with sterility are the important factors that must be considered.

#### CANCER OF THE MOUTH

In cancer of the mouth too far advanced for removal Wright says the malignant growths may be kept under excellent control by injecting carbolyzed petrolatum (3 per cent strength) into the tumor.





# GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



## NEURASTHENIA AND ITS TREATMENT

A description of the symptoms of this disease, its many manifestations, with methods of treating it and its complications, as practised by the French dosimetrists

**I**RRITABILITY, ill humor, discouragement, the impossibility of collecting one's thoughts without falling into reverie, the spirit of contrariness, despondency, the feeling of exhaustion, irresolution, indifference, are the principal symptoms of nerve-weakness. The neurasthenic gets out of life only that which is evil in it and tastes none of its sweets because he is ceaselessly anxious about the bad things which life is preparing. This fear about what is to come, of deception and of permanent disillusionments torments, saddens and desolates the patient, who is always unstable and at times even prostrated by the fact of nervous depression. These psychic signs are accompanied by digestive troubles, vertigo, irregular sleep, emaciation, throbbings of the heart and of other regions, nerve-trembling and localized pains.

The features are drawn, the cheeks glossy and pale, the eyelids dark, the eyes red, the senses changed (sensitiveness to noises and odors, ringing in the ears, weak sight, *muscæ volantes*). At times the neurasthenic has strange and odd sensations, such as that of an icicle down the neck, pinchers on the nose, cobwebs on the forehead (which last sensation perhaps gave rise to the French popular expression, "*avoir une araignee dans le plafond*," which means,

to have cobwebs in the ceiling, i. e., in the head).

Among the digestive troubles we notice frequently enough bulimia, the patient requiring a very strong stimulation in order to make some certain effort, declaring himself to be unable to do some certain things except after a solid square meal. And that bulimia is paid for of course with heaviness, flatulence, gas-distension, stasis, and fermentation with all their toxic consequences, which exasperate and perpetuate nervous misery. Against this bulimia one granule each of cannabine, hyoscyamine, Gregory's salt and cicutine, taken half an hour before each meal, will exert a sedative and moderating power, most useful for the stomach.

The headache of the neurasthenic consists of that heaviness which is described as "a helmet on the head," of frontal, ocular, and temporal pains, or pain in the back of the head and neck. Very marked is this pain when the stomach is empty, and it becomes less after a meal, and it may begin again as a result of noises, emotions and work.

Spinal irritation causes also rachialgia with sensations of heat, burning, lumbago, lancinations in the vertebral spinal processes, a feeling of constriction rendering

the contact of the very garments painful, the cervical and sacral regions being the preferred spots for attack. For these as well as for the headache and rachialgia monobromated camphor and quinine valerianate are the remedies. Rachialgia may at times require slight revulsives, such as spirit of camphor, mustard plasters and stupes, or even a firing-point.

We find neurasthenics who sleep well, but as they lack the feeling of restoration and refreshment on rising in the morning they readily imagine themselves not to have slept at all. For that reason it is that often on their arising they are anxious, sad, harassed by uncouth ideas, accompanied with a feeling of tiredness more marked than at their going to bed. To the strange phenomena of the neurasthenics belong also the colorless voice, aphonia, the same as we meet with in convalescents; a sense of choking during a meal; succussion of muscles, similar to electric shocks on going to bed at night; more strange yet is a feeling as if the lower extremity were undressed; fibrillary contractions; swooning, waves of heat; a sensation of freezing of the extremities from the weakening of the vasomotor tonus; fragility of hair, nails and teeth; creaking in the neck; hay-asthma and false angina pectoris. To this let us add yet nocturnal cramps, and on this occasion let us say that the professional cramps of writers, pianists, and violinists show a very clear neuropathic origin, not, however, excluding arthritic elements.

Certain subjects are attacked in their emotional sphere and present the neurosis of anguish. Others again experience a nerve-crisis upon a sudden atmospheric disturbance, or when displeased or opposed: then the chest is compressed, the head is hot, the temples throb, the cranium is felt as if being struck with a hammer, the face becomes red and swollen, and the features drawn, the patient feels that he must move and spend his energies, and he does it at times with cries and sobs, and the crisis terminates with tears and profound prostration. These crises may be relieved by inhalation of ether, by granules of camphor

monobromide, and by those of phosphide of zinc, six of each (*pro die*) combating these crises, which weaken the senses by repeated attacks on a depressed state which entraps and binds them.

The neurotic borders frequently on mental alienation and general paralysis of which neurasthenia and hypochondria are really only prodromata. The neurasthenic state may last at times for years before the unmistakable signs of mental deficiency show themselves, and then the doors are opened for the patient to what is euphemistically called the sanatorium! But isolation as a treatment is really useful in the first phases only of neurasthenia, when suggestion can render its services, and suggestion can really be best practised in isolation, in the absence of friends' idle talk and the reasonings of parents and relatives who, like Penelope of old, destroy the woven fabric of the physician's good counsels. Suggestion is the grand remedy, and often it is the only remedy against the aberrations of psychic instinct; instead of constantly analyzing, suggestion lets us accomplish our end after the manner of the Gobelin weavers, without seeing the thing we work at.

The treatment consists first of all in checking the physical or mental causes of neurasthenia. We must act against the phosphorus deprivation, which goes on by phosphaturia and which is the tangible cause of musclonervous lack of power, and we must do it chiefly by means of alimentation, because pharmaceutical phosphates are very uncertain of assimilation. We find in cereals, in milk-products, in eggs, in brains, in Gruyere cheese, in malt beer, in fish, in the entire body of molluscs the greatest store of phosphorus. Then living in the open air is indispensable for the city neurasthenic, by which he both perfects retarded oxidation and stimulates nutritive changes. One month of out-of-door treatment suffices at times to eliminate from the urine the excess of urates and phosphates, the creatin, the indican and even any traces of albumin which they may contain.

If anemia is dominating in a case we must hasten to enrich the blood-globules with

iron and notably with quinine hydroferrocyanide, which beside its hematoplastic action possesses also an elective influence on the vasomotor system. If there is an overexcitement of the nerves we give the bromides, especially those combined with camphor, also with zinc phosphide and hyoscyamine. Against depression and exhaustion of nerves we have in strychnine arsenate and in stenol (a combination of caffeine and theobromine) just what is therapeutically needed to raise the general tonicity and wake up the excitomotor power of medullary centers and thus fight at once against psychic adynamia (psychasthenia) and against nutrition-atony. We may give two or three granules of strychnine hypophosphite before meals and one or two teaspoonfuls of stenol after the meals.

In case of gastrointestinal phenomena the effervescing magnesium sulphate, papain, quassin and an abdominal bandage will give us the happiest results. [THE GLEANER personally uses the following in cases of abdominal slow venous circulation: Narrow Russian crash toweling, long enough to go three times around the body. Moisten in moderately cool water one length to go around the abdomen and wrap the dry remainder over the wet part, and fasten the end moderately tight with safety pins. Keep it on only during waking hours. It will take a little expertness to do it properly, but the trouble of doing it will be paid by the diminution of the abdominal trouble from congestion caused by visceral ptoses and other causes.]

Against palpitations, cardiac pains and false angina pectoris we may prescribe quinine valerianate, sparteine and the salicylates in feeble doses. In case of nervous angina we prescribe Gregory's salt. Given at the start it will weaken the agitation and increase confidence.

In persons of hypertonicity it will be best to neutralize the humoral acidity (see at the end of the article) and facilitate elimination, and for that purpose prescribe alkalis, laxatives, diuretics, and above all, ureol [the chemical name of its basis is hexamethylenetetramine.—GLEANER] an antiuricemic *par excellence*. Give a milk and

a chlorin-free diet, order baths, friction and d'Arsonvalization (high-frequency current). These various remedies will sensibly modify nervous irritability. In cases of hypotonicity we make use of the tonicardiac granules and force up the activity of the circulation by a special diet of good living, good generous wines, inhalations of oxygen and hypodermic injections of artificial serum, which are by no means to be neglected.—Dr. E. MONIN, in *La Dosimetrie*, March, 1908.

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#### TOXICITY OF DUODENAL SECRETIONS

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Roger and Garnier have previously established the fact that the contents of the small intestines and especially that of the duodenum are more toxic than those of the large intestine, so that, contrary to the classic opinion, the toxicity of the intestinal contents does not depend exclusively upon putrefaction. This toxicity of the duodenal contents does not depend exclusively upon the emptying of secretions into this part of the small intestines, an opinion which Cybulski and Tarchanoff have recently maintained, and which they attributed to the pancreatic juice. When we collect the liquid which accumulates in a duodenum that has been ligated at its two ends, under the influence of injections of secretin, (duodenal extract), this liquid injected into a rabbit, even forty to fifty cubic centimeters per kilo-weight, will not determine the immediate death of the animal; the duodenal liquid of a dog collected under the same conditions as above is toxic to a rabbit in a dose of four cubic centimeters to the kilo-weight of the rabbit, and this is a toxicity far below that of a duodenal contents of an animal while digesting, which is from a half to one cubic centimeter per kilo-weight.

If we collect by a fistula the pancreatic juice of a dog obtained by injection of secretin we shall find that the injection of even 16 to 20 centimeters per kilo-weight of a rabbit will not kill the animal. This pancreatic juice will not become toxic unless it be mixed with a certain quantity

of duodenal juice, then it will kill in doses of two to four cubic centimeters per kilo by producing coagulations in the right heart. This activation of the pancreatic juice by duodenal liquid is not due to the presence of bile: the mixture of pancreatic juice with bile is not more toxic than bile alone, which kills a rabbit in the dose of eight cubic centimeters per kilo-weight. This action is therefore that of the duodenal juice.

In the same way, too, it is that in order to obtain the digestion of albumin we have to provoke toxic manifestations by uniting pancreatic juice with duodenal juice.—(*Gazette des Hopitaux*, 1908, p. 489.)

#### TREATMENT OF BURNS

J. C. Biddle recommends the following ointment for burns, which he says he used for the last twenty-two years with great success: Lead oxide, 455.0; acacia, 30.0; sodium bicarbonate, 10.0; linseed oil, enough to make a soft ointment.

Wash the burn-sores thoroughly with soap water, spread the ointment over the sore, cover with cotton batting and secure with a bandage. Fingers must be dressed each separately. Limbs must be kept stretched out. This dressing need not be changed often. Lead poisoning from this ointment the author never met with as long as the ointment was compounded with gum arabic.—(*Les Nouv. Remedes*, 1907, p. 479.)

#### POTATOES IN THE MENU OF THE DIABETIC PATIENT

Mosse has ascertained that the diabetic patients have a surprising tolerance for potatoes and that the glycosuria may be favorably influenced by the patient's feeding on potatoes. Labbe retested the statements of Mosse and warns against the use of potatoes *ad libitum*, since such an unreasonable use may aggravate some diabetic's condition. The patient's tolerance for carbohydrates has first to be determined. If the potato is to a certain amount, tolerated, then it may be of

great usefulness in the diabetic's diet because it has a greater volume than other farinaceous foods. The potato has from two and one-half to three times less carbohydrate than the same amount of bread and therefore potatoes can be given in three times as great weight as bread. The potato is generally a favored dish and has the additional advantage of being capable of preparation in various ways, and it can absorb a large amount of fat. Fried potatoes retain from seven to nine percent and mashed potatoes still more. Moreover the diabetic patient is more tolerant for potato-starch than for that of the bread.—(*Pharmazeutische Zentralhalle*, 1908, No. 9.)

#### BLOOD SPOTS ON WEAPONS

A. Florence succeeded excellently in making such spots visible and to determine their origin. He uses a microscope with an internal illumination apparatus and in this way is able to see the individual blood-corpuscles and photograph them. The procedure is extremely simple and makes it possible to recognize the minutest traces of blood upon nontransparent objects with a certainty hitherto unknown. This procedure moreover has the advantage over all others in that in demonstrating the blood it is neither destroyed nor changed.—(*Arch. d'Anthropologie Criminelle*, June, 1907.)

#### BELLADONNA, DATURA, AND HYOSCYAMUS

According to Peltriset the powdered leaves of the above plants can easily be distinguished from each other under the microscope when close attention is paid to the crystal-filled cells and the hairs, thus:

Belladonna: Hairs few and smooth. Cells filled with crystalline flour.

Datura: Hairs few and dotted. Cells few with crystalline flour, but very many oxalate "druses."

Hyoscyamus: Many voluminous smooth hairs. Few cells with crystalline flour. Numerous prisms.—(*Bull. d. Sciences Pharmacol.*, 1907, p. 575.)



## WHAT REMEDIES SHALL WE USE?

A discussion of the Kentucky resolutions and other efforts to limit the doctor in his choice of remedies and the selection of his reading matter. Shall he be a free agent?

AT the December meeting of this Society a set of resolutions from the Kentucky State Medical Association were introduced for our consideration and adoption, the sum and substance of which was that we as a body and as individuals would pledge ourselves to use in our practice only such remedies as are endorsed and recommended by the American Medical Association or the authorized agents of that body known as the Council on Pharmacy. Consideration and discussion of these resolutions were postponed until this meeting and the members present requested both Dr. J. W. Gray and myself to prepare a paper on these resolutions and shed some light on the subject.

That section of these resolutions that mostly concerns those of us who are of the rank and file of the profession reads as follows: "Resolved, that we request every physician in Kentucky to procure a copy of the abridged United States Pharmacopeia and National Formulary and be guided by these and the Council on Pharmacy in their use of medicine."

I do not know that the Council on Pharmacy sanctions or endorses these resolutions, but if it does, it seems to me the most stupendous piece of bigoted egotism it has ever been my misfortune to behold. Who is this great Council on Pharmacy

that the U. S. P. should need its endorsement or approval; are not those men who revised and compiled that book fully as well versed in materia medica and therapeutics and as able to advise as to the remedies to be used as are those who compose this august body? Certainly it would seem so to me.

Ever since medicine has been known and men have practised it there have been various sects or schools of medicine radically differing in their ideas and teachings regarding disease and the proper remedy or drug that should be used in the effort to cure disease. In this age we have the allopathic (or regular, as we call ourselves), the homeopathic, the eclectic schools, and many others, each one claiming their method the only correct one. While this is not true, it is nevertheless true that there is much that is good in each of them and much that is worthless in all.

While I admit the Council on Pharmacy is doing a good work, we all know it is the agent of the American Medical Association, and that body is the official representative of the regular school, hence it naturally follows, as a matter of course, that it does not take cognizance of remedies advocated or prepared by other schools.

I believe, if there is any man or set of men who should adopt as their motto, "prove

all things, hold fast (only) to that which is good," it should be the physician, and he should go to the bedside of his patient untrammelled by the *dictum* of any man or set of men, free to use the best means at his command to relieve his patient, regardless of the sect or school that recommends the remedy he employs.

That old saying, "the powers that be are ordained of God," does not hold good in this day and generation. I have seen instances when I thought his satanic majesty had more to do with the ordaining of the powers than did the Supreme Being. I have always lived in the South, was born before the war, hence I was a rebel, and (perhaps) unfortunately for me, I have never been fully "reconstructed;" therefore that old rebellious spirit that is in me, and will not come out, gets up on its hind feet when I know any man or set of men are infringing on my rights. I strenuously deny the right of the A. M. A. or any other body of men to dictate to me what remedies I shall or shall not use. I claim that so long as I comply with the laws of the land in which I live I am accountable only to God and my patient for my conduct toward them.

It is not my wish nor intention to exploit any remedy or set of remedies. I leave the choice of remedies to each individual physician, as he alone should be the judge as to what is best for his patient. I only plead for freedom, the freedom granted everyone in this great country of ours—freedom of thought, of judgment, of action, untrammelled by the *dictum* of any man or set of men.

I am of the opinion that there is more in these resolutions than is seen by a casual glance, and we are forced to ask the question, "Whither are we drifting?" There is a spirit of usurpation abroad in the land, seemingly an effort to concentrate or centralize power in the hands of a chosen few. There is a fight being made on the independent medical journals, quite a number claiming they are a menace to the welfare of the profession and should not exist, that the members of the profession

should subscribe only for and read those journals that are the organs of the state or national organization. Also, in some of the states an effort is being made to get a law enacted forbidding physicians dispensing their own medicines and compelling them to send all their prescriptions to the druggist.

Now the enthusiastic admirers of the great Council on Pharmacy ask us to pledge ourselves to use only such remedies as they in their wisdom think best for us to use. If these things come to pass, truly the medical profession would cut a ludicrous figure. The great J. A. M. A. and the state journals will dish out to us such articles as they think we should read; the druggist will give us what we order, if he has it, if not, he will give us "something just as good;" the Council on Pharmacy will tell us what medicines we are to use; while we, to quote one of our forefathers, can "lie supinely on our backs" and meekly accept what is given to us.

I protest against the adoption of the resolutions, because in spirit, if not intent, they throttle all independence of thought and investigation and would make of the medical profession a set of irresponsible, ambitionless men, mere pawns in the game of life, moving only as we are told. But in contrast to this spirit of bigotry and egotism there is and has been for some time a spirit of tolerance and liberality, one for the other, in the different schools of medicine, seemingly an inclination to draw nearer together and accept the good each or all may offer. This I think should be fostered and encouraged in every honorable way, and I believe I am safe in saying that the liberal-minded leaders in the profession are doing this and apparently do not hesitate to prescribe remedies from other schools than their own and seemingly do not hesitate to endorse and recommend them. This is as it should be, but with all due respect to the American Medical Association, it does not seem as if the present leaders of that body favor such a course.

While counsel and advice are good and should always receive proper consideration

and respect, when it becomes an obligation it is no longer advice. There are very few well-informed physicians that are willing to discard a remedy they have tried and know to be good simply because such remedy is not recommended by the Council on Pharmacy. Long years of experience have taught many of us that a remedy that gives good results in the hands of some may prove worthless in the hands of others. Again, a remedy that is beneficial in treating certain disease-conditions in one person may prove worthless or unsatisfactory in treating another whose symptoms are seemingly identical.

Hence I say, let the medical profession, especially those of us who are country doctors, remain free and untrammelled in treating our patients, but let each of us study our cases, and study our remedies, and do for our patients what our knowledge and judgment prompt us to do. If we have not a sufficient knowledge of drugs and their effects on the human system to know what to use and what to let alone we have no right to practise medicine. If we know these things, certainly we do not need the dictation of the A. M. A. When a physician reaches that age or condition wherein he can not, or will not, be guided by his own judgment and knowledge in treating his patients, he should feel in duty bound to those who trust their lives into his care to follow Osler's advice and get on the shelf or take chloroform, be his age what it may.

One or two gentlemen made the assertion that the word "nostrums" as used in these resolutions has reference to patent medicines. Allow me to say, that the greater part of the first thirty-five years of my life were spent in Kentucky. I practised medicine there and have many warm friends among the members of the profession in that state, hence I know whereof I speak when I say that in intellect, professional attainments and gentlemanly courtesy they will favorably compare with members of the profession in any state in the union. Therefore it is hard for me to believe that the State Medical Association would so far forget the courtesy due their professional

brethren as to pass resolutions even only insinuating that they were so ignorant of materia medica and therapeutics as to use patent medicines in their practice. Such a resolution would be an insult to the dignity and intelligence of the profession of Kentucky.

To the young men in the profession, those who are at the beginning of life's journey—while I am near its close—to you I would say, "Be not like dumb driven cattle." Be men, think, judge, act for yourselves, cultivate a habit of independent thought and investigation, guided but not controlled by the study and investigation of the learned men of the profession; and, after careful study, form your own opinions and be guided by them until convinced you are in error. Be ever open to conviction and ever ready to learn, regardless of who the teacher may be. Often valuable information is derived from very humble sources.

Take for your motto the words of Thomas à Kempis, who said, "Mark not who said this or that, but mark the word spoken." Rest well assured, no man can carry your burden—that is for you alone to bear, and you alone will be accountable to God and your fellow man for the life you lead. Rest assured you will find it the part of wisdom to think for yourselves. Study closely the theories advanced and judge them on whatever merit they possess and not on the merit or reputation of the man who advances them.

Very soon on your shoulders will rest the responsibility of upholding the honor and integrity of our noble profession. Strive to acquit yourselves as true men and prove yourselves worthy of the trust.

H. C. BUCK.

Friars Point, Miss.

[This paper, which was read before the Clarksdale and Six Counties Medical Society, at Clarksdale, Miss., is full of good advice and excellent thought, and the spirit in which it is written should commend it to every man who does his own thinking. We agree with Dr. Buck, *thoroughly*. With all

proper respect for the excellent but misguided men who would have all people believe and practise exactly the same things they do, because they are convinced they are right, and whoever disagrees with them wrong, we pin our faith to intellectual freedom, to the individual doctor—believing in the right and duty of every man to seek truth *for himself*. That's our Declaration of Independence, and that, in our opinion, is the only way in which intellectual growth and vitality can be insured. Let us have free men in our profession, from top to bottom, not a condition of mental slavery that makes men fear to leave the broad, well-traveled roads of authority lest they too feel the crack of the *master's* whip. The humblest among us, as well as the most learned, has this right to freedom.—ED.]

#### VARICOSE VEINS

Every physician engaged in general practice meets with many cases of varicose veins. Of course there are a variety of causes, but one great cause doubtless is wearing garters that constrict the leg and prevent the free return of the blood in the veins. Might not much of this trouble be prevented by physicians generally recommending a garter with a double hitch which would in no way interfere with the circulation?

W. H. HARWOOD.

Chasm Falls, N. Y.

[Why not have a general expression of opinion from the "family" as to the best treatment for varicose veins? This is a common and annoying disease. How do you manage these cases, Doctor?—ED.]

#### A CASE OF ELEPHANTIASIS

Mrs. N. Y., 63 years old, born of English and German parents, both of whom lived to be past 75 years of age. Mrs. Y. is a mother of twelve children, the youngest now being 22. Her early motherhood was spent in Minnesota, then she moved to Southern Texas. After living there a short

time she began to have chills followed by fever. In about three months after the chills appeared her right foot began to hurt, and this was followed by some swelling. After a day or so of some pain the swelling would disappear, only to return in a few weeks. After each attack of pain and swelling she noticed the swelling would not entirely disappear. For ten years this affection was wholly confined to the foot,



Front View of the Case of Elephantiasis

then quite rapidly it extended as far as the knee. Some twelve years after this disease began, in 1886, her last child was born, and in a short time, perhaps one year, the whole right limb was affected, and at one time for a few weeks the entire right side to the shoulder was swollen.

The above is the history of the case as I was able to obtain it from her. The woman is very intelligent and I believe she gave me a good report. I have known her for twelve years and have attended different members of her family, including herself, in sickness. Whenever I have attended her it was when she had "spells with her leg."



These spells are always ushered in with a chill and intense pain in the limb. The limb becomes very feverish and painful to the touch. Several times I've found her temperature to 104°F. During these spells with her leg she would be entirely unconscious. I have known her to be unconscious for four days.

I will not try to describe the appearance of the limb but instead will send you two photographs, which show for themselves.



Rear View of the Same Case

The whole limb is smaller now than it has been in ten years. The measurements of the two limbs are as follows:

	Right	Left
Ankle .....	16 in.	11 in.
Calf .....	24 "	14 "
Knee .....	23 "	15 "
Middle of thigh.....	25 "	15 "
Highest part of thigh.....	25 "	16 "

The right ankle has measured 24 inches. The limb is always larger in the summer. There is some uneasiness in the limb all the time. Other than this she is a very healthy woman. The x-ray will penetrate

the foot but not the hypertrophied portion. The foot now is enlarged but very little.

JOHN TINDER.

Parsons, Kans.

[This is a remarkable case and of much interest. I think, however, the case is one of true elephantiasis, due to filaria. The occurrence of intercurrent attacks of erythema in the affected part is a marked feature of this disease. I have found immense benefit resulting from the application to the effected limbs of an india-rubber bandage. In fact, after using it a few weeks the patient has invariably assured me that no money could buy that bandage from her. Since this is a filarial affection, and the "sleeping sickness" is also a filarial malady, and the latter has been found to be benefited by the internal administration of atoxyl, an arsenic preparation, I would suggest the propriety of putting this patient upon atoxyl and pushing it to full action, that is, to saturation. If you accept this suggestion, I should be very glad to hear of the results. Elephantiasis is not a very common disease; nevertheless, among our readers there must be a good many cases known, and I am sure that the successful treatment of a case would be welcomed with the deepest interest.—ED.]

#### A CASE OF CROUP

I think it only just to tell you of my success with calx iodata in croup. I have used it in many such cases, but one case deserves special mention.

I was called hurriedly to see a boy nine years old. When I got to his home his mother was returning with a neighbor and told me I was too late. She said she guessed her boy was dead and she would not go into the house. I said I would have a look at him anyhow. I found the boy stretched out, mouth wide open, gasping for breath, and a very great cyanosis visible.

I immediately commenced to give iodized calcium; we had trouble getting him to take it. All preparations were made for his passing away and their clergyman was sum-

moned. Knowing how the drug had acted for me before, I said he would recover. I worked for him for one and three-quarters hours, and when he found that he was getting his breath easier he begged for more medicine. I gave him a good dose every quarter of an hour and pushed it to the limit. He begged at first to be taken outside for fresh air. He got absolutely stiff and the cyanosis was very marked. The nostrils expanded to the utmost possible during the great dyspnea. When I left at the end of one and three-quarters hours he was perfectly comfortable.

When I first saw the boy the neighbors all said it was no use doing anything because he was going to die, but when I returned in the evening, to be sure everything was all right, these same women were advising what to do in case he ever had croup again.

I treated the same patient two months previous to that for lobar pneumonia and used the alkaloids throughout the disease, the patient having reached the stage of consolidation when I was called.

Some people laugh when I leave such small pills, but are willing to admit they are all right when they have cause to cease taking them.

As you are overloaded with case-records I have not sent any. I simply want to tell you that what you say is true—examine the case thoroughly, select the proper drugs, and then push them to the limit. As long as we have good drugs, like the active principles, we can do good work and know what action to look for.

WM. S. McCORMICK.

Philadelphia, Pa.

#### WAS IT PNEUMONIA?

Can pulmonitis or any other disease be prevented? is a question often asked and often laughed at by those who pretend to know it all and who have had only a theoretical learning without any clinical experience. These men have without any logical reason classified such diseases as self-limited diseases. There is not such a thing as self-limitation in diseases. Every ailment, every

disturbance, if taken in time, can be cut short, even aborted, if treated in the right manner.

Here is a case which is a proof or what I have advanced. One night, not long ago, the snow was covering the ground and the air was cold and invigorating. I was suddenly called to see a child, age seven years. On seeing her, my first impression was very sad indeed. I had before me a child nearly suffocating, breathing as fast as she could. A decided pinkish color covered her little cheeks, her looks were haggard, her mind wandering. A very severe chill had preceded these symptoms.

On examination I found crepitant râles all over the chest; the heart's action was so rapid that I could not count the beat; axillary temperature was 108°F. A cough existed for which the parents had given different patent syrups. *Horribile dictu!*

I was, I think, in presence of what I term a *pneumonie d'emblee* (incipient pneumonia). I became desperate. I had to "kill" that fever and reestablish the heart's action and equilibrium of nervous center. I had some glonoin, digitalin and strychnine tablets for hypodermic use. I immediately gave an injection, full dose. A sheet was dipped into cold water, wrung out, and the child, naked, placed in it. A tremendous chill took hold of the child, it was the reaction-chill, as I called it at the moment. Little by little the patient became quieter and the breathing more steady. I did not forget the little granules. I had ten dosimetric trinity granules dissolved in 20 teaspoonfuls of water. At first one teaspoonful every half hour for eight doses was administered, and afterward one teaspoonful every hour. The wet sheet was removed when dried, during the whole night.

Next morning, when I called, my little patient was feeling better; the fever had gone down to 102°F.; but the weakness was great. Brandy and water was ordered, and the following special cough-mixture:

Ammonium chloride....	grs. 2
Carbolic acid.....	gr. 1-6
Syrup of squill.....	dr. 1-2
Syrup of tolu.....	dr. 1-2

This dose (1 teaspoonful) to be repeated 3 times a day.

I continued the dosimetric trinity granules, one every 2 hours, until next day. Twelve hours thereafter the fever had gone down to 100°F., and twelve hours after that the temperature was normal; but the child was very weak and the cough remained. In a week's time the child was up playing in his room.

Call this whatever name you please, it is evident that a serious trouble had been averted by the timely interference of the physician, and I am sure that the little deferrescent and dosimetric-trinity granules, with the help of hydrotherapeutic measures, saved the life of that child.

F. D'ORBESSAN.

Ozone Park, N. Y.

#### LAPSUS CALAMI

In the April number of CLINICAL MEDICINE we made a rather "bad break" for which we take this opportunity to square ourselves. We said, page 459, that Philadelphia "cannot yet support a really live medical journal." What we intended to say was that Philadelphia "cannot yet support a really live *weekly* medical journal." The Quaker city really has about the liveliest bunch of monthly medical journals published in this country or anywhere else. A town which can boast of such journals as Sajous's *Monthly Cyclopedic*, *The Medical World*, *The Medical Council*, and Albright's *Office Practitioner* is certainly to be congratulated. We tender our apologies to all these journals and their editors and publishers. They are all doing great work and should receive the hearty support of the medical profession, each in its own peculiar field.

#### PNEUMONIA. THE "SQUARE DEAL"

I report no cases other than six cases of pneumonia, three of which were pleuropneumonia, all treated wholly along the alkaloidal line of practice, all relieved on the fourth or fifth day, and all recovering. Some say, "We all have cases that terminate or abort in a few days without much, if any, treat-

ment, that is, your cases were not real pneumonia, because they did not go on in the regular line to the 'hole in the ground'." I tell them, if they had been their own cases and the treatment were not mentioned, they would certainly have had six cases to their credit that were "cured" of pneumonia.

Doctor, you have a host of friends who will hold up your hands, not as members of a sect, but as searchers for "Truth," and *The Journal of the American Medical Association* is one of the best advertising mediums you have. Down a good thing? Never! If more physicians would study drug-action and the use of the active principles, as you are so earnestly teaching, there would be fewer nostrums and proprietary remedies in the market.

Why any sane physician can "have a kick" on purity of drugs has always puzzled me. That "my patients have been used to large capsules and bitter and nauseous doses so long that they would not have any confidence in my treatment," is a pretty poor argument. God pity the man with such an excuse for confidence. In my opinion many a case has gone to the undertaker, not because of misapplied remedies but because of the remedies applied; the "golden opportunity" was lost eternally waiting for the action of the active principle that the fluid extract or tincture or crude drug did not possess, the chagrined doctor wondering all the while why he lost the patient.

I cannot help but commend you, Doctor, for the good you have done me, and can't keep quiet longer in expressing to you my contempt for the way you are being served at the hands of *The J. A. M. A.* I am not a writer, and this is not for publication unless you think it will fill in a little notch that possibly has not been handed up. May *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* continue to prosper in the future as it most certainly has in the past, is the wish of yours for truth,

I. L. TURMAN.

Cynthiana, Ind.

[We are glad to know, Doctor, that you stand with the rest of our friends in con-

denning this unjustified and malicious attack upon us by *The Journal of the American Medical Association*. The doctors of America know what we are striving to do and what we have really accomplished. I wish you could see the hundreds of letters like your own which have come to us, endorsing the work we are doing and condemning the action of *The Journal*. Men who have been helped in their daily practice, who have found the alkaloidal preparations good and the Abbott doctrines sound, are not going to be stampeded by venomous personal attacks. The alkaloidal idea is founded upon sound principles which nothing can destroy, and in practice it is fundamentally honest and straightforward from beginning to end. This great therapeutic movement will stand. There is all the vitality of truth behind it.—Ed.]

### THE STINGAREE

Having noticed your article in the May CLINICAL MEDICINE, page 610, entitled "The Stingaree," and having lived for two years in the little town of Manatee, Florida, on the bank of the Manatee river, only eight miles from the gulf of Mexico, I will say that the stingaree inhabits both the river and the gulf.

Along the Gulf Coast we have little villages of fishermen, who naturally have to be in the water and are exposed to the wrath of the stingaree, and are often stung by them. They inflict a very painful wound, but not necessarily a fatal one. In fact, under proper treatment the wound soon heals, but without proper care and treatment the sting makes a very ugly sloughing wound. The mortality is not more than one in a thousand, if that.

Old seamen tell me that the stingaree is not dangerous except in its breeding season. Then they become vicious.

*Treatment.*—Incise the wound to the bottom, wash the wound in a solution of permanganate of potassium, then cauterize well with pure carbolic acid, which renders the wound aseptic and relieves the pain. Then saturate a piece of gauze or absorbent cotton with carbolic acid and pack the wound to

the bottom loosely. Dust with iodoform and dress with gauze and bandage and leave alone for twenty-four hours, then remove the packing from the wound, wash with some good antiseptic solution, such as bichloride of mercury, one in 2000 (or a solution of permanganate of potassium), dust with iodoform and dress with gauze and bandage. Treat it in this manner for three or four dressings, and that is all that is necessary. I do not think the stingaree has a venom like a snake, but the poison is on the outside of the sting.

We also have the diamond-black rattlesnake here, and it is considered the most dangerous of all reptiles, fish or animals that inhabit this country. Its venom is very poisonous, and the mortality very high. Evidently the men that were talking to you knew but very little about the sting of a stingaree or the bite of a rattlesnake. It is almost sure death to be bitten by a rattlesnake if help cannot be obtained at once, and even then the mortality is very high. If a large rattler bites a dog he will die within two or three hours—sometimes within thirty minutes. This is the difference between the bite of a rattlesnake and the sting of a stingaree.

T. M. McDUFFEE,

Manatee, Fla.

### SOME THERAPEUTIC COMMENTS AND QUESTIONS

Why do not all doctors use the alkaloids in alkaloidal form? I have taken THE CLINIC from the first, when it was almost too young, weak and small for care in an incubator. I have often thought of writing my views and experience with, and the superiority of, the alkaloids, but the case is so plain in favor of alkaloids that argument seems foolish and a work of supererogation. We had as well make arguments on a bright day that the sun was shining.

I might also ask why all physicians do not take THE AMERICAN JOURNAL OF CLINICAL MEDICINE. Each year it grows better.

As to the case in the April number, page 504, would not Donovan's solution answer

all of the purposes of "arsenauro?" Would not Donovan's solution be a good preparation of mercury to go in a prescription containing potassium iodide, or would the bichloride be the best preparation? If we cannot use the green iodide of mercury at the same time iodide of potassium is given, then we cannot use this preparation in the "mixed" treatment of syphilis.

Dr. Sourwine's curet: Can one with ordinary skill with it remove all contents and abnormal tissues without danger of puncturing the uterus?

"Medical Partnerships," page 469: The article and idea are good, though I think the suggestion that either one or all of the members consult with the attending physician without a consultation-fee, a bad idea, calculated to cheapen the services and standing of physicians in the eyes of the laity, and would do away to a great extent with the physician's individuality. Am I not correct?

To act on the advice given in the article, "The Day of the Hustler," would it not be necessary for the doctor to advertise in the papers or "by word of mouth?"

Page 63, "Dosage for Children:" The other night, fourteen miles from home and by the dim light of a small lamp in a little mountain cabin, I formulated the following rule: The patient being 4 years old, I took 24 years as the full adult age and divided that figure by the child's age (4 years), which produced 6. Then dividing the adult dose of strychnine of 1-30 grain by 6, I had 1-180 grain for the single dose for the child. This gave me 4 granules of 1-30 gr. in 24 drams of water, and the dose 1 dram three times daily. This gives the same results as Cowling's rule if the figure of present age is used instead of that of next birthday.

Is not the rule by weight uncertain, as the amount of adipose tissue varies? Is 1-180 grain of strychnine too much for a child 4 years old?

Page 556: I wonder what Dr. W. E. Baldwin charged for healing and aborting that case of pneumonia—detention of time all night. Should not a doctor be paid extra for efforts and success of that kind? How much extra? If so, the granules would

make money both for patient and doctor, instead, as now often is the case, the doctor's bill is much less on account of quick recovery.

Can you give me the formula for a "hair tonic" known as "Baker's Hirsutis?"

C. W. HUNT.

Brevard, N. C.

[These letters from old friends please us mightily. And the good things they have to say about CLINICAL MEDICINE "do us proud." Now as to the questions: first, as regards arsenauo: Donovan's solution (liquor arseni et hydrargyri iodidi) is quite a different thing from arsenauo (which is a bromide of gold and arsenic) and certainly can not be substituted for it. The arsenauo is certainly an excellent preparation, uniform in quality, and we would be unwilling to use any N. F. substitute for it.

We can see no reason why Donovan's solution and potassium iodide should not be used in the same mixture. What say our readers?

The Sourwine curet certainly can be used safely by any doctor of good ordinary common sense.

Why not discuss this whole question of "Medical Partnership" through the columns of CLINICAL MEDICINE? It is a very important one and all details, such as this one raised by Dr. Hunt, should be carefully thrashed out.

As to the "Day of the Hustler"—we would answer in the negative; certainly not. We are absolutely opposed to the doctor's advertising. But that doesn't mean that he should hide in a corner.

The dosage idea is good. Who can match it with something else equally practical? Open for discussion.

Any one who knows the "hirsutis" formula will please us by sending it in.—ED.]

#### URETHRAL CARUNCLES

Enclosed you will find a picture of where one of the "family" lives and does business, and I want to add my small testimony to the beautiful results from the use of hyoscine, morphine and cactin compound.

One case illustrates its wonderful action. Patient, Mrs. M., was to be operated upon for two large urethral caruncles and a small cluster of smaller ones. Patient came to the office at 8:50 a. m. and was given immediately one hyoscine-morphine-cactin tablet hypodermically. In twelve to fifteen minutes everything was ready. The patient now was very calm where she had been nervous, the pulse was steady

She had no nausea at all, no headache, no anything but a sound sleep, and there had been perfect anesthesia from the use of one H-M-C tablet and 1 1-2 drams of chloroform.

She made a perfect recovery and has no fears of an anesthetic now if only one uses "that medicine you put in her arm" before you begin.

Yours for "the best obtainable means to produce a desired therapeutic result."

ROScoe C. TARBELL.  
Groton, N. Y.



Dr. Tarbell's Home and Office

and instead of 120 per minute it was 96, and she felt very drowsy and so sleepy that the little remaining preparation hardly aroused her.

In less than four minutes she was entirely under the anesthetic, chloroform, and where the caruncles were so excruciatingly sensitive that they could not be touched, they were now removed very easily. The base was touched by a little caustic and a small urethral stricture reduced by negative galvanism and the whole area treated with a little positive galvanism to render it less painful.

The patient was removed to another room and slept on as peacefully as a baby. After the lapse of thirty minutes she would from time to time rouse up and answer questions but immediately drop back into this delightful, peaceful sleep.

At 12:30 o'clock she awoke and was feeling very good and urinated without any difficulty and with very little pain.

wife and babies a chance to get acquainted with the rest of us. You are proud of them! Send in their photos for publication in these columns. Every man who has a camera (and every doctor should have one) ought to contribute his pictorial "mite" for our entertainment as well as his "mite" of practical experience for our help. The second should be a duty; we hope the first will be a pleasure.—ED.]

#### A FRIENDLY CRITIC HAS HIS "SAY"

Of all the medical journals that I read CLINICAL MEDICINE is by far the most instructive, although it does often exhibit the very faults that it condemns in other journals and in some of our standard textbooks.

For example, in a recent number one of the editors declared that he threw Flint away and never again opened the pages of the work simply because the author had made the indefinite statement that in a certain disease

potassium iodide would "probably" prove beneficial.

In the November CLINIC Dr. Wallace C. Abbott is almost equally indefinite. Thus he says that in the treatment of pneumonia we "employ two great sedatives and two great tonics, the former being aconitine and veratrine, the latter digitalin and strychnine." Under "method of application" he says, "Generally begin by combining the sedative aconitine with the tonic digitalin." But how combine? In what proportion? How administer? In what dosage?

In high fever he adds veratrine, thus making the "defervescent compound," but again he fails to tell us just how to administer the remedy.

Again the doctor says, "Frequently the physician will select and try the combination containing strychnine, the 'trinity, at his morning visit.' Here, like Flint, Dr. Abbott says, 'try.' But how try? In what dosage? How frequently given?"

The use of the above four remedies Dr. Abbott declares to form the "backbone of the treatment." He however adds that "one that is frequently added is arsenic," admitting that "the reason for this is, however, not well understood." I had been taught to believe that the active-principle method is always dependable, never uncertain, never "not well understood."

When it comes to "indefiniteness," Flint is not alone, by any means. I can pick out hundreds of instances in THE CLINIC where the writer finds so-and-so good for this or that malady without even the slightest hint as to how the remedy should be given. In this brief criticism I have selected Dr. Abbott's article, from the fact that it is one of the leading articles in the November number.

Now a word or two as to the active principles and I am through. The dosage given in "Alkaloidal Digest" and as given in answer to "Queries" is often at a wide variance. Take, for illustration, helonin. The "Digest" says, "1-6 grain three to six times daily." In answer to "Query 5320" the writer says, "In habitual forms I have fallen into the habit of giving helonin, one grain

four times a day, beginning two to four days before the expected period." Here is indeed valuable information, from the very important fact that it is tangible. But why not dispense the helonin in grain-granules instead of 1-6-grain size.

The above is written not in the sense of carping criticism but, as you requested in the December number, to "fill in any gaps which we have overlooked." With best wishes for the continued success both of CLINICAL MEDICINE and of the alkaloidal theory in medication, I am

J. A. Cox.

Wheeling, W. Va.

[Our friendly critic's letter is so characteristic in many ways, that we shall take more than ordinary space in discussing it.

The criticism of Flint and other text-books is not because he (or they) are indefinite in describing the treatment of *one* disease; it is because that is the general attitude with which therapy is handled in such works. In most of them there is entire absence of detail in the section devoted to treatment; we are not told why certain remedies are used, how they are to be alternated or combined; how we are to know whether we are obtaining the effects sought or to be desired—in fact, the principles underlying their use. It's this very paucity of information, systemless method of handling, which leads to therapeutic nihilism.

Furthermore, we are trying to impress upon the doctor the importance of getting away from mere slavish dependence upon *books*; to show him the importance of going directly to nature and studying disease itself, that he may have a practical knowledge of sick human beings and of methods of curing them rather than an academic knowledge of disease borrowed from others and passed on from man to man and generation to generation.

To a certain extent Dr. Cox is right in his criticism of our recommendations, but the indefiniteness of which he complains is not our fault. The remedies themselves are definite, the action which they exert is definite, but the reaction of the patients

on whom they are used differs. For this reason, in the discussion of the remedies themselves, we go to the utmost pains to afford all data obtainable, and state the action of the remedies in the most explicit manner. But in the treatment of pneumonia, when we commence to use aconitine, veratrine, digitalin or strychnine arsenate, we use each of these for a specific purpose, and give it until that purpose is accomplished. It may require a few doses and a short time, or many doses and a long time. It may require little doses or large ones.

Knowing exactly the effect we are desirous of obtaining, we give simply till that effect is obtained. For this reason we combine these remedies according to the indications, in such proportions as the symptoms of the case at the time demand. We administer them in large or small doses, at long or short intervals, according to the nature of the case.

The trinity and defervescent compound formulas have been given in these pages hundreds if not thousands of times, and are so very familiar to our readers that we do not always repeat them.

It is necessary that these combinations should be "tried," for this reason: Sometimes we find a patient whose symptoms are those of asthenic fever, and we give the defervescent compound the preference. But after a few doses it becomes evident that the strength is more apparent than real, and asthenic symptoms develop, upon which we switch around at once to the trinity combination of Burggraave. It is not so much the effect of the medicine we are testing as it is the reaction of the patient.

When we spoke of the action of arsenic being not well understood, we meant by the profession at large; and we went on, in the article criticized, to explain what this action was, namely, that of inducing fatty degeneration. This action, exerted upon the newly formed products of inflammatory disease, hastens materially the resolution and absorption of these products, leaving less work for the weakened system to perform during convalescence. This we be-

lieve is the reason why arsenic has proved of value, given even during acute fevers; that is, in proper doses.

In the ordinary practice of medicine with the galenics we have two elements of uncertainty. One of these is as to the nature and degree of action to be exerted by the drug. This is eliminated by the use of the active principles. But there remains a second uncertainty, and that is, as to the exact condition of the patient. This we seek to clear up as far as possible by our diagnosis. The reaction of the patient to the medicine is always a matter of experiment.

This reaction is uniform enough to enable us to predicate to a certain point what results will follow the exhibition of a dose of the medicine. But naturally there is a variability here, and this point is excellently illustrated by our friend's quotation as regards helonin. The specific function of this remedy is to relieve or prevent the pains of dysmenorrhea. When we wish to relieve these pains, we give helonin, as the "Digest" says, 1-6 grain three to six times daily, increasing the frequency of the doses until we get the desired effect. But when we wish to prevent the pains, it is obvious that we cannot determine the dosage in this manner. We are compelled here to use an average dose, hence, in answer to Query 5320, we suggested that the inquirer give one grain four times a day as the average dose. After trying it he might find that two or three times this dose is needed, or on the other hand, that a smaller dose would fulfil his needs.

If this matter is not made perfectly plain, we would be very glad to have further questions on it submitted by anyone who feels an interest in it. The whole matter is an excellent illustration of the difficulty of departing from the old idea of set, uniform dosage of remedies, and adopting that of dosage to effect. This is the greatest stumbling block in the application of scientific drug therapeutics. It is one of the things the physician has to unlearn, and it is difficult for every one of us. The writer is not excepting himself, for he stumbled over this



block so long and so persistently before the truth dawned upon him, that he is certainly not in a position to find fault with his colleagues for doing this in a lesser degree. —Ed.]

### A FRIEND INDEED

DEAR DOCTOR ABBOTT:

I, as every doctor who is a member of the A. M. A., have read the contemptible and cowardly attack upon you, and have waited to see what you might have to say in reply thereto in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, and finding nothing, thought I would write you.

Now, Doctor, I realize that you are in deep trouble. I tender you my sincere sympathy. I believe you are honest and square. I believe also that your extreme optimism has caused you to venture a little beyond your depth, but I believe, too, that your object was not to benefit yourself alone, but you have sought to be helpful to all your patrons and associates and to the medical profession generally.

This being true, I thought if you would make a frank, full, true and honest statement of your whole liabilities and assets and lay the matter before your subscribers, the *CLINIC* family especially, as one member of a family might lay bare his troubles before his whole family, I believe the "family" would rally to your assistance, if each member was assured in some way that the others would do the same.

I am ready to do my part to help to place you squarely upon your feet again, and I believe the rest of the family will do theirs. Three years' prepayment on subscription, or some other plan might be submitted; stock in a reorganization of your company, etc.

Fraternally yours, E. B.

—, Iowa.

We thank this good friend (whose name we do not print because we do not wish to submit him to annoyance by the "enemy") from the bottom of our hearts. We have no doubt that there are thousands of others who would rally to our help as he suggests. While we do feel the bite of hard times and the reaction from these venomous attacks, we are still carrying our burden successfully, alone, and we can continue to do so if our friends will stand with us, but how much easier it would be along the lines indicated—lines which appeal to us very strongly, and which we have been seriously considering for some time. In fact, it was with a view to ultimate reorganization on a broad corporate basis, a basis commensurate with the unstopable evolution of this only true therapeutic idea that our few cooperative bonds were floated as a test of the situation.

It is true we need money and need it right now—very much. We are just moving into our new building. That means large expenditures, calling for spot cash. Final building bills are yet to be paid. Thus far we have done this all alone, without even the usual building mortgage. But while broad of back and resourceful within ourselves we are carrying about all we can, and besides, the added difficulties make every dollar look "as big as a cartwheel." You *can* help us, far more than we can tell you here, and as a first move, by renewing your subscription promptly, paying up one year or three in advance (for \$5.00 we'll send you *CLINICAL MEDICINE* for three years), subscribing for your neighbors, or suggesting that they do for themselves, pushing with the alkaloids in every way you consistently can. Or, if you are not a subscriber, as every red-blood man must be—well, shake!—be with us! And all such practical help *right now*, will be appreciated, Brethren, as never before.

But while our hearts go out in thankfulness for such friendship we do not want anyone to get a wrong impression or be at all alarmed concerning our financial standing. It was undoubtedly to foster this spirit of fear that the attacks upon us have been made—to shake our standing if possi-

[Isn't that fine? How many men or firms have friends like this and lots of them—friends who will rally about them in time of trouble and offer to put their shoulders under the burden which they believe almost too hard to bear?

ble. Never fear! A structure built on a really "square deal" that deserves confidence and gets it, as we do, while it may be shaken can never be overthrown. There are too many strong hands and warm hearts behind it—too much of the real in life and love. And right here we want to say, once more, that we have nearly ready a reply to this attack which will interest you mightily. Possess your souls in patience! Don't misinterpret our silence. It is not a sign of weakness, rather one of strength.—W. C. ABBOTT.]

### A REMARKABLE MONSTER

I was called to consult with Dr. John W Hyre, April 3, 1907. The patient, Mrs. B., was located in a lumber camp, and this was her first confinement. Labor commenced on Sunday. I was called Tuesday evening at about 6:00 p. m. On examining her I found a foot presenting, the pains were very weak and the parts very dry and hot. The other doctor had sent for ether, but as it had to come some distance, it would be late, so we went to work and at half past ten delivered a girl of eleven pounds. The child had no head above the upper lip, that is, no bones; but the placenta formed the top of head. It also had cleft lip and palate. It was living when born and survived twenty-four hours. What was very curious to me was that placenta was attached all around the lower part of the head and neck, the brain being located in the placenta. It also had three well-developed teeth, the rest of the child being normal. I have never seen another case like it, nor read of one.

B. F. McINTIRE.

Lowland, W. Va.

—:0:—

We note with interest your report of the birth of a monster. We should appreciate a detailed report, but are you not in error as to the placenta? How could the placenta be attached to the skull of the child. Did you not deliver the placenta subsequent to the birth of child. Fleishy growths taking the place of the bony part of the skull are not unknown. Where did the cord end on

the maternal side? Did it run from the umbilicus of the fetus to the margin of the fleshy growth attached to the face and was this in turn adherent to the wall of the uterus. The delivery you speak of is unquestionably a very interesting one and we only regret that you did not take a photograph of the fetus or even preserve the fetus in alcohol. Had you done so it would have been of value to the profession.—Ed.

### THE POST-GRADUATE COURSE HELPS

Permit me at this moment to show my appreciation and express my gratitude for the help which the postgraduate course in therapeutics has already done for me. It is just fine. Each month I watch anxiously for your journal, and although very busy, I can always squeeze out a half hour each day to spend reading its pages and gathering fresh food from the field. I am indeed very thankful to Dr. Abbott and his co-workers for this rich and golden opportunity which they have placed before me.

I beg herewith to state that I have had quite a number of pneumonia cases to treat, and have treated them all alkaloidally with medicines dispensed in my own office. In addition to these I used the flaxseed-meal poultices, as per lesson and method given in the February lesson, with great success. With the alkaloids I get quicker and surer results, and I use them with fullest confidence as to the results expected.

A. W. THOMAS.

Trenton, Tenn.

### APOMORPHINE: HOW TO USE IT

Very few physicians have learned to use apomorphine except as a hypodermic emetic. Few hypodermic outfits are without a bottle of the one-tenth grain tablets. This is as it should be, for apomorphine is an invaluable remedy in many emergencies; but it has other uses almost as valuable, it being an excellent expectorant, an effective hypnotic, an admirable gastric sedative and antispasmodic, and in conjunction with aconitine

and strychnine, our best-known remedy in capillary bronchitis.

The action of apomorphine hypodermically and by the mouth appears to be radically different, but this difference is simply due to the rate of absorption. When given hypodermically the whole dose enters the circulation in a few seconds; given by the stomach the dose is absorbed more slowly and the effect produced is similar to that of a small dose, 1-30 grain or less, hypodermically. Most patients require one grain of apomorphine by the mouth to produce an emetic effect, while only one-twentieth of this amount is required, in most cases, if it is given hypodermically. This will explain why one-tenth of a grain of apomorphine may be given half-hourly by the mouth for a number of doses without producing an emetic effect. When it is used hypodermically in doses of 1-10 to 1-20 grain, it seldom fails to produce prompt emesis; but 1-30 grain hypodermically rarely acts as an emetic; but *this dose does act as a prompt and well-nigh infallible hypnotic.*

In rare instances 1-30 grain may produce emesis, but the hypnotic effect promptly follows the emptying of the stomach. An occasional patient will tolerate a dose as large as 1-20 grain without the production of emesis. The "rule" which should be observed is to give just enough to produce the complete relaxation which is followed by sound sleep, but not enough to produce nausea or vomiting. One-thirtieth of a grain hypodermically meets the indications in about ninety-nine cases out of one hundred of adults.

The production of sleep by apomorphine is due to its action on the central nervous system, whereby complete relaxation is produced, and sound natural sleep must of necessity follow. Apomorphine then does not produce sleep as other hypnotics do, but it does produce such a condition of the physical organism that the patient cannot help sinking into natural sleep. Its indications range all the way from mild insomnia to furious delirium, whatever may be the cause. If the patient is suffering from delirium tremens it is often good practice to empty

the stomach by giving 1-20 grain of apomorphine and at the same time tone up the circulation (which is always disturbed in such cases) by a hypodermic injection of 20 minims of ergot, or one grain of ergotin. Doctors who have not tried this combination of apomorphine and ergot in delirium tremens will be astonished and much gratified by the results.

In all these cases sound sleep is produced in ten to twenty-five minutes, and the patient will rarely fail to sleep less than eight hours under favorable environment. The sleep induced by this method is refreshing and restful; it is not followed by any of the unpleasant symptoms that usually follow sleep induced by drugs. It is well to remember that while apomorphine is a cardiac stimulant, the extreme relaxation produced by it, plus the effects of a prolonged debauch, may render it a dangerous drug in delirium tremens unless its effect is guarded by the ergotin as above recommended. With this exception apomorphine is as safe as well as certain hypnotic; it produces its results in a few minutes and almost never fails to turn the wildest delirium into sound, refreshing sleep.

Its emetic action when the dose is increased precludes all possibility of its producing a habit, the great danger from many of our sedatives and hypnotics.

As already stated, when given by the mouth, very large doses of apomorphine are required to produce emesis, most patients requiring one grain in hot solution, and even this sometimes fails to produce emesis, but it may produce complete relaxation and profound sleep instead.

As an expectorant it will probably loosen the ordinary "tight cough" quicker than any other known remedy; when there is dryness and deficient secretion, tight cough and tough sputum two to four granules, gr. 1-67, should be given every half hour until the desired effect is produced. Used alone, or in connection with emetine, lobelin or codeine, it has a very wide field of usefulness in bronchial troubles.

Brunner advises morphine and apomorphine given together to increase mucous se-

cretion and lessen irritability of the respiratory center, especially when there is dyspnea, constant cough and tough mucus.

In acute laryngitis and capillary bronchitis it has proved of great value, from the fact that it seems to be a mucus-attenuator, as well as a stimulator of the membrane. The dose should be small and frequently repeated, and it should always be given in solution.

In capillary bronchitis the tendency to carbonic-acid poisoning and subsequent paralysis is well known and dreaded. By the early use of apomorphine combined with strychnine, we produce a thinning of the mucus in the bronchioles, which are liable to become clogged up with a tenacious exudate, thus anticipating a condition of occlusion in the alveoli, which is the alarming feature of this disease. Meantime the strychnine supports the nerve-centers against the collapse of the patient, and greatly assists in the removal, by expectoration, of the accumulated exudate. If these two remedies are given early in the disease and pushed to effect, few cases of capillary bronchitis will ever terminate fatally. If there is fever present, the addition of aconitine, gr. 1-134, to each dose is indicated. Other symptoms, such as cough, may be treated with codeine, and the spasmodic type with appropriate doses of hyoscyamine.

As an antinauseant or gastric sedative, apomorphine is proving a surprise to many physicians. When given by the mouth in doses just short of the production of nausea, its sedative effect is marked and certain, relieving conditions very similar to those produced by fairly large hypodermic doses.

As an antispasmodic the action of apomorphine when given hypodermically has been fully described under its use as an hypnotic. Shoemaker mentions the use of apomorphine as a remedy for spasmodic cough, asthma, convulsions, strychnine-poisoning, maniacal delirium and to relax rigidity of the os uteri. Another authority reports a case of strychnine-poisoning which was controlled by apomorphine, the patient recovering. The writer would suggest its employment in tetanus, in which it should be pushed to effect.

In that form of hysteria whose dominant symptoms consist in clenching the fists, kicking the feet about, staring eyes and closed lips, but without any apparent reason—and whose fundamental causation might be aptly, though I confess not delicately, expressed as “cussedness”—a hypodermic of apomorphine will work a very salutary change in a speedy and benign manner. In order that the doctor may protect himself against unjust censure, it is well to state to the patient or to the friends that if the hypodermic injection is not given you are afraid the patient will throw up, and that if the patient throws up without the hypodermic injection, dangerous consequences may result, but that if emesis takes place after the hypodermic injection is given no harm can possibly result to the patient. They will thank you for your precautions, and you may go home rejoicing in work well done.

Solutions of apomorphine on standing for a short time gradually turn gray, then green from oxidation; and although some writers on materia medica declare that this color-change produces in some way a change in the character of the drug that makes it dangerous to use, the writer has used it in the above way time and again without being able to notice any difference in the action of the apomorphine, and certainly no deleterious action. This change in the color can be avoided by the addition of a few drops of hydrochloric acid or vinegar; but if neither of these are used, the attendant should be warned that the change will take place but that it does not in any way affect the action of the medicine. Uncoated tablets of apomorphine are liable to become greenish in color. Some writers have pronounced such tablets inert. Do not be deceived by the statement. Such change in color does not change their strength one iota.

The dose of apomorphine as an expectorant is two to four 1-67 grain granules every half hour or hour. For a child of six years dissolve twenty-four granules in three ounces (twenty-four teaspoonfuls) of water; for a child of two years, twenty granules in three ounces of water; for a child of one year, fifteen granules in three ounces of water; an

infant may receive half a teaspoonful of the solution prepared for a child one year old. In any case, if improvement does not follow within three or four hours, the dose should be increased. The remedy should be given with the care required when any depressing remedy is administered. The antidote in case of poisoning is strychnine or caffeine hypodermically, with hot coffee internally and the application of external heat, or all together if the case is urgent.

The physiological antidote of apomorphine is chloral and chloroform. It is incompatible chemically with alkalis, potassium iodide and iron chloride.

Every general practitioner will find many and varied uses for apomorphine. A remedy that meets so many important indications with certainty and precision is too valuable for any physician to neglect.

E. G. PAXTON.

Chicago, Ill.

### THE DOCTOR AS A PUBLIC MAN

The doctor *is* a public man. No one can be a doctor and not be a public man, in the true sense of that term. He is ever before the people, by night and by day, in sunshine and in rain. Every schoolboy will exclaim, "There comes the Doctor!" He is known of all men. His opinion is asked in many things besides that which is medical. He is supposed not only to know everything of anything, but laymen are so severe in their demands that they expect him to know something of everything. He is for the people, by the people and of the people. He seeks to supply their wants. It is the people he wants. It is the people he must have, and it is the people he gets. He must be wise as a serpent and harmless as a dove.

It is true, the doctor's heart must be centered upon medicine. It must be his chief aim in life, yet he must in a sense become a part and parcel of a wonderful combination. He must in a word become a lawyer. He must at least understand legal protection in just measure. He must be a botanist, and must add the perfumed

words of that sweet language to his vocabulary. He must be a farmer; he must know how to grow other crops besides those of transplanted germs. He must be a teacher. The doctor has much to do beside giving medicine. He must teach and promulgate the great laws of health. These laws obeyed will unquestionably prove a greater blessing to suffering humanity than materia medica. And surely the real, true doctor will have theology enough to give comfort and hope to the dying. He will be poet enough to sing forth the tender sentiments and ennobling thoughts which stir the human heart. Surely he believes, with the physician-poet Keats, that "a thing of beauty is a joy forever."

What is a public man? It is one whose life finds a response in the hearts of the people. The doctor must live in the hearts of the people. Daniel Webster was a public man, and still lives in the hearts of the people. Jenner was a doctor, yet he was a public man and he still lives; smallpox died, but Jenner lived. Harvey was a doctor, yet is he not also a public man? Hippocrates, "the father of medicine," is a public man—he still lives.

There is always a public place, a public trust, for the doctor. He may even be called to preside over the destinies of the people from a civil point of view. The doctor is a public man; he does not step one round higher when he is holding a public office of trust—elected by the people—than when he is administering medicine at the bedside of his fellow-man. He must be a public man and he must be loved by the people. The old school reader used to quote:

"I do not love thee, Doctor Fell,  
The reason why I cannot tell."

The little girl who said this evidently did not like the doctor. This is all wrong—it will never do! She should have said:

Oh, how I love thee, Doctor Fell,  
Because you make me sound and well.

The doctor loves the little girls as well as the big ones—his heart yearns for them all.

In all communities, and especially in the minor towns and villages, the doctor belongs

to the circle of the educated. He is one of that small circle. His various studies, especially those of a scientific nature, make him familiar with public questions and the problems of the day. He is consulted on the great question of sanitation, water-supply, and the mode of subduing epidemics, how to preserve public health, the school-life problem, the care of the insane, the poor and the feeble-minded.

No one should be more of a leader in all philanthropic, patriotic enterprises than the doctor. The doctor must be a brave public man. When disease and pestilence and death come—where is the doctor's place? Shall he flee with the people? Shall he run from danger? No, he stands like a stone wall, he braves the mouth of the cannon, he will be found in the hospitals, in the miserable tenements, cheerfully tending the sick and risking even the examination of dead bodies that the disease may be found out! This is public life—it is public virtue.

During a great plague in Marseilles the doctors decided that nothing could be done to stay the plague and save the people unless one of the victims of the disease could be dissected and the nature of the disease learned. But who would do this? Doctor Guyon arose and said he would do it. He entered the hospital, made the dissection and examination, wrote out the results, and in a short time he himself died. But the physicians learned how to treat the disease, and the plague was stayed. Was he not a public man? A public man is one who, like Dr. Guyon, *saves* the public. He is one who, like Dr. Rush, fought the yellow-fever in 1797, one like Dr. Gross who fought the cholera in 1832, or one like Koch in the bubonic plague of recent times.

The doctor is ever before the public. He has to do with man's entrance and exit—the alpha and omega of his existence. Birth and death, life and health, germ and disease, joy and sorrow, youth and age—with all the phases of human life, the doctor figures before the public. This is a greater public trust, a higher public office than being king or president.

And yet, when there is a call for what the doctor can do or give for the public good, along the lines of statesmanship, he need not falter. In the South American States the great statesmen are all doctors, as a rule. It should be so here in the United States. No better men could be found for gubernatorial office, legislature or senate in Iowa than from among the doctors' ranks. There is no such noble band of men as in our profession today. No other class of men have done so much for humanity—so much for public good!



DR. E. A. NASH

"Is there no balm in Gilead, is there no physician there?" This question was asked in ancient times, showing that even in those remote ages the doctor was a public man, the greatest man among ten thousand. It is so today! Who is it the public seeks night and day, here in the United States, from the Bay of Fundy to the Golden Gate? It is the doctor. Who is more of a public man than the doctor? The doctor deals with the most important things known to the human race.

Life is all there is in the world and in the universe. What is life? You know the various definitions given, but let me say, life is that which the doctor seeks to save and perpetuate. So then, what can be greater or nobler or more public than the profession of medicine. Every doctor holds

a public trust. The fate of kings and queens are entrusted to him. The public hangs breathless on the doctor's decision. He is a sort of nexus between all classes and conditions of men the world over.

Rejoice then, all you who have aspired to claim that great name, Doctor. It is above all other names. It is the brightest star in the public sky. It is the survival of the fittest. That name means something. That name means a public man. It means a good man.

And so, the times approaching fast indeed,  
Our country calls, and it is now in need  
Of men with royal hearts and loyal pride—  
Grand men in whom the people can confide,  
Men who are for Right with might and main.  
Who will not sell their work for paltry gain,  
Who will not aid a greedy millionaire  
To bring his fellow man into despair  
And make the common public slaves of toil,  
Whose daily sweat is mingled with the soil!  
My friends, if you should ever be thus great,  
And join the ranks, to wield affairs of state,  
Become in truth a noble man of fame,  
A man of principle as well as name,  
On whom the waiting public can depend.  
How proud I'll be to own you as a friend!  
But on the other hand, if you connive  
Like politician, just to keep alive,  
Become a knave to please the so-called great,  
It would call forth my everlasting hate!  
The meanest act committed by vile men  
Is to betray the friends who trusted them.  
Oh, let your aims in life be nobler far  
Than worthless common politicians are!

\* \* \*

Ah, do not envy "Public Men,"  
Nor seek to gaze upon  
The statesmen's gifted power—  
Life and its work will soon be gone,  
And doctors have a higher plane,  
A brighter crown to don!  
The doctor is a public man  
Wherever you may go,  
He sails amid the sea of life,  
And saves the high and low.  
The doctor is a public man,  
The Nations call him so.

E. A. NASH.

Troy Mills, Ia.

#### THE TREATMENT OF ULCERS

I treat various ulcers very differently from the ways given in CLINICAL MEDICINE and, the results being satisfactory, I will tell you how it is done.

Wash the affected parts well every day with warm (nearly hot) water and tar soap; then bathe with peroxide of hydrogen or

hydrozone. If the limb is badly swollen a very strong lobelia wash is beneficial; this is made by steeping lobelia in water.

Then put on a poultice made of sweet cream and wheat flour. Put the cream in a saucer, add flour to make a thin batter, and place on top of stove and cook until it will all roll around without sticking. When cooled right bind it on. This is soothing, cleansing and healing. After a time the ulcer begins to "run off," the stagnated blood grows lighter-colored, and it gets healthy and then heals.

After it is healthy it can be healed very quickly by the applied blood-dressing.

DAVID B. WOODBURY.

South Paris, Me.

[We note your method of treating ulcers. If you have not already used carbenzol soap try it in place of tar soap and watch results. We thoroughly approve of the use of prepared bovine blood, and as you know, recommend it frequently in the treatment of leg-ulcers. You will find sanguiferrin extremely efficacious; apply on plain or medicated gauze.—ED.]

#### "DOPE FOR QUACKERY"

I would like to have a word to say about an editorial in the March number of CLINICAL MEDICINE, under the caption, "Restricted Practice," and also to direct the attention of all your readers to the subject dealt with, and ask their opinion thereon.

I for one think it would be a good thing, financially and educationally, if some means could be devised by physicians to prevent the profession generally from prescribing "dope for quackery." By dope for quackery I mean any drug or compound labeled with or wrapped in literature giving the therapeutic uses and virtues of said medicine, no matter by whom manufactured.

In the past we have been used by the manufacturers as a medium through which to advertise their nostrums to the public, who utilize the information they gain from the wrappers or labels of original packages or samples to prescribe thereafter for them-

selves and their neighbors. Patent and proprietary compounds are superfluous and have come to occupy a large field through our foolishness in putting them before the public, to our own undraining.

I will not deal with all the points dealt with in the article, but I will say that the man who must depend upon the manufacturer for a knowledge of pathology and therapeutics is a poor physician indeed, and will remain so if not compelled to go to his library for information.

E. J. GILLERAN.

La Junta, Colo.

[Your definition of "dope for quackery" does not apply to the phrase as usually understood. Should it be adopted, it would cut out a large majority of the articles which have been approved by the Council on Pharmacy and Chemistry. Why don't you extend your definition a little further and include all drugs whose supply to the medical profession and the sick is restricted by monopoly?

As usually understood the term "dope for quackery" is applied to the practice, of manufacturing houses, of supplying to advertising quacks and patent-medicine makers the means of carrying on their business. These men buy their tablets, etc., by the million, while the regular practitioner buys his by the hundred or the thousand; naturally the quack gets better prices and better treatment, since he is individually a much larger customer, although in the aggregate the regular practitioners' orders must largely exceed those of the quacks. You are trying to sidetrack this matter and substitute an altogether different one. Suppose you stick to the more important one until it has been remedied, then if you wish to advocate a change in the practice of supplying remedies to the profession, which has prevailed up to the present time, and still prevails with every drug house in existence, it will be time enough to accomplish this change at that time.

It might be added that the doctor who is unwilling to learn helpful things from the manufacturer, *or from any other source*, is

making a serious mistake. (We might put it stronger!) Pick up every practical idea you can that will help you to cure your cases and in a manly way show your gratitude to the giver. None of us "knows it all."

Like you we are opposed to underhanded methods of reaching the laity through the doctor. But the doctor really demands a certain amount of information on the package-labels. This information is valuable, put on generally to help him, not with any intention of encouraging self-medication by the laity. The problem is to give the maximum of aid to the doctor, with as little as possible that can be used to his detriment. Where shall the line be drawn? There is a difference, also, between selling direct to the doctor, catering to his trade only, or selling through the druggist, for most of the self-medication is the result of dispensing unbroken packages over the counter. Just how much *shall* be put on the labels? What say our readers?

Dr. Gilleran's classification of "patent and proprietary compounds" together and calling them all "superfluous" approaches perilously near to asininity. (Pray pardon the word!) Did you ever stop to think, Doctor, that a very large proportion of U. S. P. preparations and probably three-fourths of those in the National Formulary are proprietaries masquerading under other names. Are these all superfluous? Take a good "think."—ED.]

#### A CURE FOR DR. CUPP'S CASE

You can tell Dr. Millard F. Cupp, through CLINICAL MEDICINE if you like, that a strong saturated solution of sodium salicylate, borax, fld. ext. hydrastis and water, used as a wash twice a day and followed each time with an ointment composed of acetanilid and white petrolatum applied freely will promptly cure all his ivy poisoning cases, whether they be methodist, baptist, catholic, infidels, black or white, or whether their ancestors had consumption, rheumatism, measles, smallpox or dyspepsia; or whether they themselves have previously been good,



bad or indifferent; or whether their diet has been fish, fowl, vegetable or liquid.

M. E. JOHNSON.

Pittsburg, Kans.

#### AMERICAN MEDICAL EDITORS' ASSOCIATION

The annual meeting of this association will be held at the Auditorium Hotel, Chicago, on May 30 and June 1. A very interesting program has been prepared, and it is expected that many connected in an editorial way with the medical journals of this country will be present. In addition to the enjoyment and profit to be derived from attendance upon this meeting and the discussion of many topics of most vital interest to this branch of journalism, the annual banquet to be held the night of Monday, June 1, will be (as always) a very enjoyable feature.

Since this meeting is to be held in Chicago, we have a special desire to meet all our brethren of the craft, and we hope that everyone who comes to the city will plan to call at the home of CLINICAL MEDICINE and make it temporarily his own. We hereby extend the "glad hand" to every visiting brother. Come by all means if you can.

#### NOSOKOMEION

A colleague honored me by requesting my opinion as to which of the two names would be preferable to be given to a private hospital, "sanatorium" or "sanitarium," the hospital in question not claiming to have any special climatic advantages, nor of any springs nearby of certain therapeutic qualities—it being simply a plain private institution in the residence district of a large city. Presuming that my answer may be of general interest, I wish to present it for publication.

Neither of the two words in question is classical Latin, sanatorium not existing at all in that language, while *sanitarius*, *sanitaria*, *sanitarium*, has the adjectival meaning of "sanitary." There exists a verb *sanare*, to heal, and sanatorium can be formed to

mean a tool or a place for healing, while *sanitarium* only means a "sanitary" or hygienic tool food or place.

In order to do justice to the colleague who made the inquiry, I wrote to my friend, Mr. Arcadius Avellanus, who is, I think, the greatest Latinist in the land, to give me some historical information referring to the two words. He answered: "The nearest Roman institution in this direction was the *medicina*, or medical shop, the office of a physician, like *tonstrina*, *pistrina*, etc.—adjectives, *taberna* (shop) being omitted. The Roman physicians used to sell their drugs in these places and took care of the patients who would resort to them for help or advice."

Mr. Avellanus confirmed my opinion that "sanitarium" is more suggestive of passive healing (*sanitas*, *sanitatis*, health), taking care of a person and aiding nature in its work; while "sanatorium" implies aggressiveness, as though defying nature and healing by force or special appliances.

Preferable, I think, to either sanatorium or sanitarium is the Greek word *nosokomeion*, for it is classical, and concerning its correctness and distinctness of expression there exists not the faintest shadow of a doubt. If we compare this Greek word with the new formations, "hospital," "sanatorium," "sanitarium," we shall find it preferable to all. Hospital is not a Latin word. The nearest to it would be *hospicium*, but this has many meanings, none of which implying what we understand by hospital. It is true, everybody knows exactly what is meant by the word hospital, but we shall see why *nosokomeion* deserves to be so introduced as the more elegant and the more useful.

*Nosos*, the sickness.

*Komeo*, to take care of.

*Nosokomeo*, to take care of sick.

*Nosokomeion*, an institution for the care of sick.

*Nosokomos*, the male nurse, and the female nurse.

*Nosokomia*, the care given to the sick.

Perhaps our refined trained nurses will thank me for suggesting the word "*nosokomos*," since by applying it to them there is no danger of confounding it with infants' or

children's nurse, nor with the ridiculous word, wet-nurse.

I may be permitted to dwell on another beauty of the Greek language by referring to combinations with the word *komeo*:

*Brephos*, a newborn child.

*Brephokomeo*, taking care of infants.

*Brephokomeion*, an infant asylum.

*Phrenokomeion*, an insane asylum.

*Gerontokomeion*, asylum for old-aged.

Of all the things which are beautiful in this world, nothing excels the Greek language, not only the classical Greek, which is only a small part of the whole, but of Greek spoken and written in Greece at this present time.

A. ROSE.

New York City.

#### ARTIFICIAL INFANT FEEDING

The subject of infant feeding is a most interesting and important one, viewed from the standpoint of either morbidity or mortality. The mortality of infancy is notoriously high, due in some instances to neglect and bad environment, but mostly to bad food and worse methods of feeding. The morbidity of this period, due almost entirely to errors of diet, is witnessed by the many cases of malnutrition, marasmus, rickets, scurvy, and the catarrhal affections of the intestinal and respiratory tracts which carry off so many of these poor unfortunates during the much-dreaded second summer. This condition of affairs is all the more lamentable because it is for the most part preventable by providing good food and proper methods of feeding.

Healthy breast-milk, from nature's fountain, the natural and only ideal food for babies, may be taken as the type of infant's food, and the nearer an artificial substance can be made to approach it in chemical composition and physical properties, the more perfect it is. Normal breast-milk is a persistently alkaline fluid, having a somewhat unusually disagreeable and very sweetish taste. It is bluish-white in color, and thin and watery in consistence, and according to Leeds, is composed of thirteen parts of solids and eighty-seven parts of water (see analysis in textbooks).

Not only does milk of different mothers vary very much, but also the milk of the same mother has been shown to vary several times during the course of a single day. This fact is the most striking feature of Leeds' investigations which show that the most changeable constituents are albuminoids, varying from a maximum of 4.86 percent to a minimum of 0.85 percent. The next are the fats and salts, the maximum being about three times the minimum; and the least the sugar. The latter, in fact, varies but little from a standard of 7 percent. The function of the albuminoids is nutritive; that of milk-sugar calorific.

We must study each of these constituents in order to determine its importance in the combination. The fats encourage the growth of the bones, nerves, furnish animal heat, and also are stored up in the body. The carbohydrates have two important functions—the production of the animal heat and of fat. The proteids stimulate the development of the tissues generally, the cells of the body, the blood, muscles and organs of the body. The function of the salts is to stimulate the growth of the bone.

In seeking a substitute for human milk, one naturally selects the milk of the lower animals, cow's milk being preferable, owing to its cheapness and the fact that it is easily obtained. Cow's milk is richer looking, that is, whiter and more opaque, than human milk, and is slightly acid in reaction. Comparing the analysis of human milk with that of cow's milk we readily observe that the two differ in specific gravity and reaction, and that cow's milk contains more nitrogenous material but less fat and much less sugar than woman's milk. Undue attention has been given to the organic constituents of milk and too little to the mineral contents.

Cow's milk contains twice as much phosphorus as woman's milk. When cow's milk is substituted for woman's milk, sodium chloride should be added. The salts of calcium are present in greater proportion in cow's milk, but this difference can safely be neglected, as nature permits of a more generous attitude in the feeding of infants than do laboratory tyrants.

While the sugar of human and of cow's milk is chemically identical and the fats are quite similar, there are important differences in the quality as well as the quantity of the nitrogenous material. This in both fluids is complex, being made up of casein, lactalbumin and peptones. Casein is an acid substance and is present in combination with an alkali, chiefly as potassium caseinate. The casein of cow's milk is readily precipitated by dilute acid and is thrown down in large firm masses; that of human milk requires more acid and is precipitated in fine, soft particles, which is dissolved by an excess of acid.

The relative proportions of casein and lactalbumin have been determined with sufficient accuracy to point out the most important of all the differences between the two secretions, which is, that the fraction of the total albuminoids in cow's milk which is coagulable by acids (casein) is far greater (perhaps four times) than the coagulable part (lactalbumin). In woman's milk, on the contrary, the reverse is true, and the noncoagulable part much exceeds (perhaps by more than twice) the coagulable portion. Taking weight for weight of each secretion, the coagulum of human milk is only one-fifth that of cow's milk.

This difference is readily determined by adding rennet to the two fluids. In cow's milk the casein is coagulated into large, firm masses, while with human milk a light, loose curd is formed. In the stomach the acid gastric juice has the same effect, producing, in the first instance, a coagulum most difficult to digest. In the other, one of vastly less bulk and readily attacked and easily broken down by the gastrointestinal solvents.

To overcome these objections, a certain amount of cereals can be added to the cow's milk. This practice is in accord with the acknowledged teachings of such pediatricists as Drs. Jacobi, Chapin, Keller and Smith. The old contention that the infant had no diastase for the conversion of starch into sugar is no longer considered to be true. Heubner, of Berlin, has demonstrated that diastase can be found in the parotid gland of an infant 2 months old, 2 weeks, and 3

hours old. An infusion of parotid gland from the beginning of life converts starch into sugar.

An ideal modification of cow's milk as an artificial infant's food is a very knotty problem, but the author believes a carefully selected milk from pasture-fed cows to which has been added cereals and maltose will produce an artificial food which will meet the demands in the greatest number of cases.

Where the density of the coagulum is dependent upon the proportion of caseinogen by reducing the percentage of the latter present, the coagulum will immediately become soft; under such conditions the author has found that the curd can be easily and readily split up by the addition of such cereals as are found in many of the artificial foods, notably in Nestle's food. This food is not a predigested food, but is one which, when prepared for use, immediately exerts upon itself that power of digestion which has been carefully preserved in its constituents. The malt, rich in diastase, acting in conjunction with the pancreatic secretions, digests the fats and albuminoids of the milk, converting the starch to form curds, thus rendering the food of infinite value to the infant, supplying the necessary nutrition and material to strengthen and build up the human economy, at the same time relieving the stomach of the infant from the expenditure of energy necessary to the digestion of ordinary food.

Careful analyses made by the leading chemists of England, Germany and America have proved that Nestle's food in its composition shows a very close resemblance to mother's milk, and that it contains all the elements of a complete nutrition, in a most assimilable form. This food is manufactured from choice milk from healthy pasture-fed cows. The milk is concentrated *in vacuo*, at low temperature, so as to preserve its original valuable qualities unchanged. To this concentrated milk is added sugar and the soluble elements of wheat flour in such proportions as most nearly corresponds to the amount of fat, sugar, proteids and the salts of mother's milk. The wheat flour is previously submitted to a special process of

baking, by which the insoluble portions are modified and prepared for easy assimilation. The product obtained in this way acts on the casein and prevents the milk from curdling in large lumps.

The directions I usually give for a child of twelve months old is the following: Mix thoroughly Nestle's food, four level tablespoonfuls; water, 20 tablespoonfuls, and a pinch of common table-salt. The food is placed in a sauce-pan and just enough water added to make a smooth thin paste, then the balance of the water is added and brought to a boil, the food being stirred constantly to avoid lumps. After boiling three minutes a milky foam appears on the top. When cooled it is ready for the child and just enough for one feeding.

Case 1. The little two-year-old son of Mrs. B. was brought to me with the following history: At birth he was a fine baby—eight-pounder—and grew nicely for the first few weeks, when the mother's milk failed to sustain the child. It lost its appetite and became emaciated. The attending physician ordered the baby weaned and had it placed on condensed milk. The digestive organs being weak, the milk was not digested; every stool contained lumps of casein; the child was fretful, and at the age of one year weighed only twenty pounds; its muscles were soft and flabby, and the joints large and prominent. From this time on until the child was brought to me it was fed on all manner of artificial foods, including cow's milk in various dilutions, boiled and raw. At the age of two years, when I first saw the child, he was approaching a rachitic state, the stomach was irritable, vomiting nearly everything taken, enteritis was present, the child passing large quantities of lumpy casein. The child had never walked nor talked, and had only the central incisor teeth, being a helpless living skeleton. Some few days before seeing this case I had received a couple of sample packages of Nestle's food, and thinking that the case was hopeless, and as every other kind of artificial food had been tried, in my exasperation I decided to try this food and gave the mother full directions, beginning with two level tablespoonfuls of the

food to 12 tablespoonfuls of water, to be prepared as above directed. The mother was ordered to feed this amount to the child every three hours during the day and twice during the night. After a few weeks the amount of the food was increased until he was taking the amount usually taken by a child his age. I, of course, prescribed for the enteritis and had the pleasure of seeing the little fellow slowly begin to improve after the first few weeks. After awhile the bowels resumed a natural condition, the stomach became quiet, the digestion improved, the boy became strong, and the rest of his teeth appeared. And now, after ten months on Nestle's food, he is a well, fat, rollicking boy, walks anywhere, talks enough for two girls his age, and is beginning to eat and digest table food.

Case 2. James, the son of Mrs. G., at birth was a fine, healthy boy, weighing ten pounds. Mother strong, healthy woman, who had nursed her former child successfully. At the age of two months it was noticed the baby was not thriving well, it was also noted that the mother's milk was not of normal quantity and quality properly to nourish the child. Various foods and medicines were tried to improve the milk, without avail. At the beginning of the third month the baby weighed only twelve pounds. I ordered Nestle's food, two level teaspoonfuls in 6 tablespoonfuls of water and a pinch of salt, prepared as above and fed to baby every two hours. He at once began to improve and grew rapidly. The food was continued, gradually increasing the ingredients in composition as he grew older, and had no trouble of any kind except an inclination to constipation, which was relieved by the use of infant's glycerin suppositories. The child is now thirteen months old, has six teeth, weighs thirty-one pounds, and is the picture of perfect health. · WILLIAM E. FITCH.

New York City.

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#### A POULTICE UNDER DIFFICULTIES

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I was called to see a man with pleurisy. He was suffering most severely and something had to be done immediately. I

called for something to make a poultice of, but there was nothing to be found. I asked whether they had salt and vinegar, and they replied they had salt and probably could get some vinegar at a neighbor's. So I gave the patient ten grains of Dover's powder, and then went to the pantry for the butcher-knife and to the coal pile for a shovel, and running to the pasture lot I removed the snow and cut out a piece of sod about twelve inches square, which I then laid on the hot stove. In a few moments it was ready and the vinegar had come. A mixture of salt and vinegar was poured on the dirt side of the sod, and this was enveloped in flannel and applied over the seat of pain. In a few minutes the patient became quiet, and in less than one hour was almost entirely relieved, and we had plenty of time to prepare another before the first one had cooled off. I have made use of the same remedy many times since, even when I could have had anything else I might have wanted. The sod should be clay-soil.

A. J. RATHBUN.

Burghill, Ohio.

### OPPORTUNITY

In the busy world around us,  
As we see it day by day,  
While we hurry on, unmindful  
Of the beauties by the way,  
There are those who in the turmoil  
Of the busy strife for gain,  
Pass by gems of greatest value,  
Which they long have sought in vain.

While they search with greatest ardor,  
Looking high, and far, and wide,  
They o'erlook the thing they're seeking,  
And go onward in their pride,  
Till some humbler, meeker brother,  
Trav'ling o'er the selfsame track,  
Finds the gem, on which the other,  
Passing by, had turned his back.

Thus we see that those deluded,  
That the good, beyond is found,  
And pursuing this, neglecting  
All the better things around;  
Oft may miss it, while another,  
No phantasmal goal in mind,  
Ever watchful, finds the jewel,  
And thus benefits mankind.

Like the children in the story,  
Gath'ring lilies on the pond,

Always hoping, ever seeking,  
For still prettier ones beyond;  
Put off plucking till the boatman,  
Rowed the craft back to the land,  
And the darkness coming on them,  
Found them each with empty hand.

So may we be prone to wander,  
And neglect our chances thus,  
Till the opportune time passes,  
Never to return to us;  
Then let us be up and doing,  
Gather flowers while we may,  
Do our best now, and remember,  
We're not coming back this way.

HOMER CLARK BENNETT.

Lima, Ohio.

### PRESCRIBING OR DISPENSING, AGAIN

I have been much interested in your comments and arguments anent the druggist and the dispensing physician, for I have been both. No question is ever settled till it is settled right, and this is no exception; and in every town where there is a physician and a drugstore an effort should be made by one or both to get together, for their own good and the good of the public.

Let us assume, first, that both the druggist and the doctor are in business primarily to make a living, and that both desire to do it honestly and according to the ethics of their profession? Further, that it is an undeniable right of the physician to dispense if he wishes. Whether the druggist has been driven into counterprescribing by the dispensing doctor, or the opposite, is immaterial. It is a fact that druggists do prescribe and physicians dispense.

A man goes to the druggist—says he has a pain in his back—thinks it is his kidneys. Does the druggist refer him to the doctor? No! He gives him Doan's, Dodd's, De Bell's Kidney Pills, when maybe the liver is to blame. Again, another man goes in and says he has a cold on his lungs, and Mr. Druggist gives him cough syrup, or worse still, he says, "Here is a prescription of Dr. So and So which he always uses in such cases." Do these things please the doctor?

Again, suppose in either of these cases these men are referred to Dr. A. B. C. The latter prescribes and does his own dispensing. Does this suit the druggist? He has lost the profit on a sale of something

which might have done the patient good—and he has had no prescription to fill. Again, the doctor has dispensed—and did it for the same fee as if he had not prescribed a thing. Why? Because if the patient needs any more medicine he must come to the doctor and can not have the prescription refilled.

There are many sides to some questions, and this is one. No one can prevent the druggist from selling Billie's Blue Pills for Blanched People if he wishes, but the druggist need not furnish them unless they are asked for.

No prescription should be refilled unless so ordered by the doctor, who is the sole judge of whether it has done its work. And if the druggist is fair to the physician not doing these things, the physician should send prescriptions to the druggist at least in part, and especially for the things that are more expensive than the doctor may care to furnish without increase of fee.

Another thing. Especially in small places is the practice of physicians owning and operating a drugstore virtually forcing the other doctors to dispense; and further, the homeopathic doctor dispenses because it is convenient and the cost comparatively small, and he has been trained that way. This too forces the others to use the same in small places, and the majority of doctors are in small places.

Not only doctors and druggists should get together, but doctors and doctors, not necessarily in practice but in methods of business. There is too much "cut your neighbor's throat" in the practice of medicine. If you can't say something good, say nothing, and do not act as if you could tell something bad if you would, either.

A. F. SWAN.

Frederick, Colo.

[Dr. Swan's article again shows the complexity of this question, and in our opinion lends support to our own belief, that the problem is an individual one, which each man must solve for himself, as his own interest and his own conscience dictate, *always* keeping in mind that the patient's interest is above that of either doctor or druggist. If

I believe that I can give better service, cure more quickly and more surely by carrying my own remedies, having them always at hand, then this is my right and duty. This is our attitude. But if you, on the contrary, believe it better for your patients to send your prescriptions to the druggist it is your right and your duty so to do.

On one thing we can all agree: If you have a druggist near you who is fair, square and helpful, you should support him. Even if you dispense there are many occasions upon which you can prescribe, showing a true, helpful spirit of reciprocity,—ED.]

#### A FEW QUESTIONS AND ANSWERS

1. Is it a fact that when at stool the salivary glands are excited beyond the normal? If not, why is the act of expectoration so freely indulged in at that time? In other words, is there any connection between the upper and lower ends, the beginning and ending of the alimentary canal, gravid or otherwise, akin to tha' existing 'twixt the mammae and uterus?

2. It is stated that the only reason that people are dumb, is the fact that they are deaf, and being deaf cannot hear articulate sounds, hence never acquire the art of speech? Is the cause structural or functional as applied to the organs of hearing? In all our medical training and reading we have failed utterly to get any light on the subject.

3. What is a reasonable explanation of the fact that two or more medicines that are very toxic may be, and often are combined in a prescription, with good effect, when if either is given in the amount that is presented by their combination, fatal results may follow?

4. Can a reasonable explanation be given on which we base the fact that our toxicants are our best, or among our best, remedies?

5. Cats and dogs, both carnivorous animals, eat grass when they wish to produce emesis in themselves. All flesh-eaters, even to the buzzard and carrion-crow, possess the power of emesis. This brings out the question, Do the herbivorous animals possess this power, or can they or do they vomit? If

not, what functional process takes the place of emesis, or is the act only confined to the meat-eaters?

6. If, as physiology teaches, meat should be thoroughly chewed in order to aid digestion, why do the carnivorous animals all *bolt* their food and not chew it at all? We personally hold that "tough beefsteak is a blessing in disguise."

W. H. H. BARKER.

Harvey, Iowa.

[1. I do not believe this to be the case, it certainly is not with the writer; and in any event, I believe it to be strictly an individual matter. Some persons may notice a tendency to expectoration at that time but not others.

2. This is the case ordinarily and in all instances excepting where there is a radical defect with the organs of speech, which renders speech impossible even where hearing is present. The person who is deaf is necessarily dumb because he is deaf, and not on account of any defect in the organs of speech.

3. The only explanation is that the two remedies counteract each other's effect or else form a chemical union by which both are rendered innocuous, a third chemical substance being formed.

4. Unless a medicine has some effect upon one or more of the vital functions it is inert; naturally the more powerful its effect is, the greater will be the value of the drug as a medicine and the greater its toxic properties.

5. The fifth question I pass along to our specialist in comparative physiology.

6. Perhaps the reason that carnivorous animals eat their food without chewing is that they are not furnished with grinding teeth, which would enable them to masticate; and secondly their digestive apparatus is arranged with a view to digesting that sort of food. It may be taken as a general rule that the teeth of any animal are correlated with the remainder of its digestive apparatus. Since the herbivorous animals are furnished with grinding teeth, their vegetable foods should be ground before presented to their stomachs. A bright editorial friend sug-

gested in regard to Wiley's suggestion, that we bolt our food like dogs, "that would be a good thing to do if we were dogs."—ED.]

### "MULE-SENSE" AND SUCCESS

In 1892 I got a sample of granules and a 6-vial case from Chas. E. Fougere, of New York. In the beginning I used them blindly, almost, as I had no literature by which to be guided. For two years I felt my way along, paying double and treble for the French goods, when I received from you a copy of *THE ALKALOIDAL CLINIC* together with other literature. I immediately sent for a 2-dozen-vial case and "Guide," also subscribed for the journal, which I have taken since, and I am proud to state that I have never regretted either.

I have been using the dosimetric preparations for more than fourteen years, and I have not the least desire to return to the old "shotgun" methods. I had become almost a nihilist before getting *The Dosimetric Review*, of New York, which I took until there was a misunderstanding between us and I discontinued it. It was a bright little journal and very practical.

In using the alkaloids a doctor must have the absolute "mule" sense or else he is a failure. For instance, he cannot be governed by Dr. Shaller's "Guide" entirely, and I don't think the doctor intended that one should. In a case of infantile convulsions or high temperature the physician cannot give to every two-year-old child two granules as directed and one for the glass; he must give enough. I have given as high as eight granules to the glass (24 teaspoonfuls) and of this I give a teaspoonful every fifteen minutes for an hour or two, watching the effect, and then as temperature begins to decline, reduce the dose and extend the time, and I have almost invariably the same results. Every symptom is improved in the course of two or four hours, with not the least bad effect.

I am not boasting. I lose patients as all doctors do who are fortunate enough to have any. But I do pride myself upon the fact that I must write but few deaths certi-

cates for children or young persons. And my friends say that I am a good doctor for babies and women and I had much rather have that reputation than that of being a great surgeon or specialist.

And right here allow me to say one word about the sulphocarbolates. My mode of giving them is to give *enough*. I usually begin with one tablet in a case of typhoid fever or any other septic condition, repeating every two hours during waking time. If after twenty-four hours there is no perceptible decline in temperature I order two tablets, two hours apart, and for the ensuing twenty-four hours increase to even five tablets every two hours. I have had to give the five for twenty-four hours, in only one case, and that was a badly neglected case of typhoid fever in a young man of 20 years of age who was almost a giant. I have never observed nausea or other bad effects.

Always when enough has been given the fever will invariably come down and I drop off the tablets as I find fever declining. It is real satisfaction to just see how the fever leaves, and I never have such a thing now as tympanitis or diarrhea. It is all rot about the sulphocarbolates producing vomiting and nausea. I have used thousands of the tablets and have never had it occur—and as you see, in allopathic doses too. I forgot to say that I employ the tablets in solution.

Now as to the hyoscine, morphine and cactin compound, I am prepared to say it is the most perfect preparation I have ever seen. I received my first consignment of the tablets from you on the 27th of February, 1907. I was called to see an old gentleman, at 3 o'clock a. m., who was suffering with renal colic. I gave him a hypodermic of H-M-C tablets and stayed by him a half hour. He went into a quiet sleep from which he awaked entirely relieved. About noon of the same day I was called to see a lady 40 years of age, suffering with the same difficulty. I gave her the same treatment, which was followed by the same results. I now use it almost exclusively for severe pains, but I'll never give it to a drunkard, and I would strongly advise any doctor to give in such cases something else. I know

what H-M-C will do, and that is sufficient. Also I consider it is dangerous for children. In obstetrics it has no peer.

B. R. BRADLEY.

Hondo, Tex.

[We have read with deep interest your splendid letter to the journal; and "splendid" is none too strong, because it is just as full as it can stick with the best kind of common sense—one of the rarest things in this world. It goes without saying that you are a successful doctor; the man who has high ideals and is striving to attain them in his practice cannot possibly go very far astray. Of course you lose a patient occasionally, every doctor does who has any kind of practice, but the man who puts brains and thoughtfulness and care and conscience into his work will not have nearly as many death certificates to sign as the fellow who stumbles along, treating his cases along textbook lines, accepting the dicta of the latest authority as law and gospel.—ED.]

#### MY EPITOME ON THE AUTOMOBILE

(Gasolin Cars.)

*First:* The car should be of chassis construction.

*Second:* The engines should preferably be of the four-cycle type.

*Third:* The engines should be four-or six-cylinder construction.

*Fourth:* The engines should be placed under the hood or bonnet, and be accessible.

*Fifth:* The engines should be supplied with some type of positive lubricating device.

*Sixth:* The car should be equipped with the beveled gear or direct drive.

*Seventh:* The transmission should be preferably the sliding-gear type, but some forms of the friction-drive transmission are successful. This applies to the "Carter" car.

*Eighth:* The wheels should be what is known as the "Artillery" wheel.

*Ninth:* If water-cooled, the circulation should be forced, having a pump for that purpose.

*Tenth:* The ignition should be of the jump-spark type, preferably operated from



a reliable magneto and spark coil, carrying an emergency set of batteries in case of mishap to the magneto.

*Eleventh:* The car should be as light as possible consistent with good construction.

I wish to retract from my former statements enough to say that there is one car, the "Elmore," employing a two-cycle four-cylinder engine, which is proving itself equal to all tests so far applied to it. I still hold to my former suggestion that for a physician's use the "Franklin" car fills all the requirements.

I wish to say further that any physician addressing me personally on this subject will receive the best attention I can give consistent with the class of questions he may ask, and the time at my disposal to answer them.

F. N. RICHARDSON.

Cleveland, Ohio.

#### THE POST-GRADUATE COURSE

I believe this is going to be the greatest therapeutic schooling we "old boys" have ever had and I want to get as much good from it as I can. It will soon be twenty-one years since I received my "sheep-skin" from the little Columbus Medical College at Columbus, Ohio, where we studied "Wood" under Professors Hyatt and Bornhill.

H. J. CAMPBELL.

Glenwood, W. Va.

#### URIC-ACID DETERMINATION IN PRESENCE OF ALBUMIN

Take 120 to 125 Cc. of the urine (previously gently warmed and filtered), add 1 Gm. of anhydrous sodium carbonate, and dissolve and filter. To 100 Cc. of the filtrate add 25 Cc. of 50 percent ammonium nitrate solution and 5 Cc. of solution of ammonia. Set aside for twenty-four hours, then collect the precipitate on a plain filter (using a 10-percent solution of ammonium nitrate containing 1 percent of ammonia to transfer the last portions). Wash the precipitate with the same solution; finally, wash through

into a flask with about 100 Cc. of distilled water. Treat this mixture with 40 Cc. of 50 percent sulphuric acid warmed to 50° C., then titrate with solution of potassium permanganate, 1.5 Gm. to 1000 Cc. The number of Cc. used to produce a permanent rose-tint multiplied by 0.00356 indicates the weight of uric acid in 100 Cc. of the urine.

J. S. TALBOT.

Milwaukee, Wis.

#### IN DEFENSE OF THE HOLSMAN AUTOMOBILE

I note in your issue of March, page 390, an article by Dr. L. M. Lowe in regard to the Holsman automobile.

I have been driving a machine of this make for four and a half years. During this time the machine has done all of my professional work besides more than thirty trips to the country. It has never been hauled in but once. Before purchasing this machine I ran four other makes of gasolin cars with pneumatic tires with very poor success. My experience leads me to believe that pneumatic tires are not only very expensive for a physician, but are absolutely impracticable, that the water-cooling system increases the possibility of trouble fully 20 percent, that the low wheels and low ground clearance, with its attendant dust-nuisance and possibility of plowing into high-centered roads, is fatal to its consideration by a physician for practical purposes. I have never had a breakage on my Holsman car which I could attribute to other than my own carelessness or neglect. The company has always treated me justly and has done everything for me within reasonable bounds. I shall always run a Holsman until a better car is produced. From my observation I think it will be a long time before its equal will be produced.

C. H. BRYAN.

Chicago, Ill.

[We have a number of other most excellent papers on automobiles which we are compelled to withhold for lack of space. We admit the short articles of Drs. Richardson

and Bryan that full justice may be done the "Elmore" and the "Holsman". Perhaps a little later we may conclude to continue this subject. Is it of sufficient interest to the "family"?—Ed.]

### HONEST CRITICISM

In your introductory letter you said, "If you do not agree with us, say so, and tell us why." So here goes for an honest review and criticism. I have carefully read *CLINICAL MEDICINE* since October and have seen much in it that I like, some of which I will mention specially later on, but



DR. C. L. RANDALL

I think you take too much time and valuable space with that Van Meter case. Dr. Van Meter may be a surgeon of ability, as his friend Dr. L. W. Lord said in the December number, but he is certainly a very careless one, or he would not have left the case as he did. I have been using chloroform and ether for nearly fifty years in hundreds of cases (more than three years in the United States army), and have never had an accident or fatal case of pneumonia following the use of either, and I will tell you why. I first determine what is to be done before ad-

ministering the anesthetic and then do it as expeditiously as possible.

Once, in Jefferson Hospital, the twenty-five surgeons on duty there were requested to repair to the operating room, where a man's arm was to be amputated for gunshot wound of the elbow-joint, involving nerves and large vessels. I supposed that Surgeon Goldsmith, who was in charge of the hospital, was to perform the operation. Besides the twenty-five surgeons of the regular staff (of which I was the youngest) there were present Medical Inspector Wm. Clendennem, once surgeon general for General Garibaldi, and Surgeon General J. C. Garcelon of Maine.

When I entered Dr. Goldsmith said, "Dr. Randall will perform the operation." I stepped forward and, turning to my associates, he said: "Dr. Seamans (the next youngest), please administer the anesthetic; Dr. Mercer, please assist me and attend to the tourniquet." While the anesthetic was being administered, I sterilized hands and instruments and got ready ligatures, sutures, adhesive straps and bandages, and when Dr. Seamans indicated that he was ready I looked at my watch, picked up the knife and went at my work, and when it was completed and the man laid on his cot, I asked Dr. Garcelon, who had been timing me, how long I had been at it. He replied, "Eight minutes."

I have had cases in which I had to do more than lift up the jaw. I have had to take forceps and pull the tongue out of the mouth, and administer ammonia and brandy; but I never had a fatal case, since I looked after the patients when they needed assistance.

Now in regard to Osler's idea of pneumonia, I desire to endorse every word of Dr. W. S. Ross's article in the December issue. I agree fully with Dr. Thalmann in regard to the early treatment of syphilis. I know that I have cured several cases that never showed secondary symptoms. My treatment is a little more heroic than Dr. Thalmann's. I cover the parts with a plaster of vaseline excepting the sore, and I burn that out thoroughly with liquid

bromine, dip a pointed pine stick in bromine and work it thoroughly through every part of the sore, and it very seldom requires a second burning.

I treat buboes in the same way after removing the plaster thoroughly. I wash the parts with a solution of bromine, from three to five drops to the ounce of water, and give constitutional treatment of bichloride of mercury in full doses. I got to using the bromine in those cases in the U. S. army after using it on hospital gangrene.

I have been delighted with several articles upon the subject of temperance and with the tone of CLINICAL MEDICINE relative to the abuse of alcohol.

Now with one more criticism I will close for this time. One would be led to think that the use of active principles was of recent date, and that "us old fellows" used nothing but crude drugs. I have been using them for forty years. I also use some tinctures and fluid extracts, also a large number of tablets as made and supplied by reliable houses, of which there are many, and with a measure of success of which I have no reason to be ashamed, particularly so in typhoid fever, where I use the sulphocarbolates until I get the desired result.

C. L. RANDALL.

Altamonte Springs, Fla.

[Doctor, I don't believe you have read the CLINIC long or you would not "mix in" the tinctures and fluid extracts with your "active principles?" This article should have appeared before, but we can't help it. Too much of the "good stuff", as Elbert Hubbard calls it—so that some of it has to wait. Don't let that discourage anyone.—ED.]

## HOW IS IT WITH YOU, BROTHER?

DEAR OLD CLINIC:

Please allow me the customary privilege, granted the elderly, of scolding and criticizing a little. I am aware that this is a whip-jacket game; but somebody should do these duties—and why not myself?

I am sometimes miscalled a "funny man," but generally my fun is so far-fetched that

one gets tired waiting for it, and still more "tired" when it comes. But, nevertheless, when Darwin thrust his "Theory of the Origin of Mankind" on the world, I did some lively and elevated kicking, as did the other donkeys.

Sadly, we find not the "missing link," but the ever-present one, the one connecting man and monkey: imitation. This is the characteristic of the monkey, doing what it sees others do. This very quality is strongly inherent in a good many people, some physicians included; and most unfortunately a great many cultivate this quality so assiduously, and develop it so exclusively, that they are but the images—and often very imperfect ones—of their patterns. And if at first they preserved the quality of originality, they dwarfed and seemingly annihilated it, by neglect. One would almost be tempted to think that the days of originality had passed after having waded through the masses of medical literature and come in contact with a few hundred medical men. But I am glad to feel that this is not so. The world is progressing, the medical profession is progressing. And progress is but another name for originality—something new, something not known before. This much by way of preamble.

The medical textbooks are useful only as the physician rightly interprets them, applies their teachings. Our "textbook doctors" are not only stumbling blocks to the progress of our profession, but are often fearfully harmful to their patients, even unto death. Our CLINIC textbooks are but the records of other men's experiences. Doctors are not doing their best when their highest ambition is to profit by other men's experiences. Such a man is either too lazy to carve out something by his own efforts (he would rather "pick up the wood that other's have sawed"), or he has not the brain capacity that should be the endowment of every physician. In either case such a man should step "down and out," for he has missed his calling.

Medical textbooks are all right, in fact indispensable, for the teaching of principles, laws and general procedures of the means

and methods of treating the sick and injured. But when it comes to *my* patient, no other man's experiences can do justice to this case. There never was a case just like this one; there never will be another case exactly like this one. Now then, I ask you, in the name of common sense, can I treat this case intelligently by relying on any textbook for its treatment?

One may look at the picture in the book and then at that on the bed, and say "they are alike;" but by so saying such a one has confessed his blindness. But if I have made a correct diagnosis (this is a broad and deep word; it means "I know"), if I know my case, understand the conditions and interpret them correctly, then I may use my textbook as a general guide. But I will not treat my pneumonia, typhoid fever, cholera infantum, meningitis or other cases as Hemmeter, Watson, Hare or any other author directs, because none of these physicians has seen my cases. To apply rationally the principles they teach I must use my own brains.

Our textbooks and literature are full to repletion with information as to the means and methods used in the treatment of all manner of diseases; and we talk one with another, and read numberless articles on "How I treat this, that and the other disorder"—each and every teacher trying to impress his own personality on his readers and hearers.

With such an education and training as this, is it any wonder that we are an army of imitators? What shall we do? What do we need? We need first to get out of all ruts, hustle our own brains, and dare to do at least some of our own thinking. We need to know the exact conditions—all of them—of each and every one of our patients; and we must remember that the conditions of our patients are distinctly individual, as the personality of the patients themselves; and we need to know most of all how best to meet these conditions, promptly, fully and correctly, not necessarily as the authorities direct. We must cultivate the habit of painstaking, conscientious examination; develop the gift of comparison, that we may differ-

entiate correctly; then, and not till then, are we in a position to understand the indications.

Just here comes in our therapeutics. What is therapeutics anyway? Perhaps this is as good a definition as any: The administration of proper remedies, at the right time, in sufficient quantity and in the right manner fully to meet the indications in our patients. Again: Give those remedies that will meet the needs of our patients, in "dose enough" until we get results, either curative or physiological, and not stop until either one or both of these points are reached.

Allow a few comparative illustrations: A doctor was called early to a case as follows: A young man, 18 years of age, of good family history; healthy and robust up to this attack; temperature 105°F., pulse 130 and jerky; respiration 50 per minute, and shallow, painful and somewhat gasping; some cyanosis; all over right chest, dull, very anxious countenance, bloody sputum, cold hands and feet.

"What's the matter, Doctor?"

"Pneumonia, congestive stage."

Treatment, phenacetin, 5 to 10 grains every hour till temperature is 100°F., one grain of calomel hourly for four doses, then epsom salt. Hypodermic of morphine for pain. Turpentine stupes to chest, heat to feet, cold to head. Result: death in eight hours. The teaching of Prof. A. was followed in this case. This boy should not have died, and would not if the indications had been promptly met. This doctor did not understand the great principle of circulatory equilibrium, nor the means of securing it.

Dr. Copy is called to see a lady of 20 years. Temperature 102°F.; pulse 120, irritable and very compressible; respiration 28 per minute; foul breath, tongue coated pale-yellow, but broad and flabby; nervous; skin dry and "leathery;" constipated; urine high-colored and scanty; sharp pain in left chest; cough and "brick-dust" sputum; nausea and great restlessness; crepitant râles, and some dulness.

"What's the matter with my daughter, Doctor?"

"Pneumonia, Sir."

Doctor scratches his head. "Lots to do here," says he. "Let's see what Prof. B. advises. "Ah! I have it now."

Treatment: Reduces fever with acetanilid or phenacetin, 3 to 5 grains every hour, assisted by cold-water applications. Quiets pain in chest by turpentine stupes, antiphlogistine, and hypodermics of morphine and atropine. Cleans out bowels with calomel, 1-2 grain, podophyllin, 1-6 grain, every hour for six doses, then "salts," and repeat every second day. Cough mixture of compound syrup of squills and codeine. Keeps head cool and feet warm, and plenty of water to drink, with nutritious liquid diet.

Result: Young lady dies on the sixth day of "nervous prostration" and cardiac failure. She should have lived, and would, if she had been treated rationally. This doctor failed to see his patient's lack of vital resistance; he took a "cut-and-dried" treatment and tried to fit it to his patient, and so the undertaker proved a better fitter than he. Because of her lessened vital resistance and cardiac weakness she could not stand the cardiac depressants and the purging that she received. Vital-stimulant tonics and antimicrobics—intestinal antiseptics—were urgently demanded here.

Doctor Lazy was called to see a man forty years old, and up to this time healthy; nervobilious temperament. Temperature 105°F., pulse 120, full and bounding, respiration 36 per minute; flushed face, great pain in right side and chest, some headache, slight delirium; foul breath and yellowish white, thickly coated tongue; hot, dry skin; scanty, high-colored urine; nausea; crepitant râles, some dulness in lower right lung; harsh, dry cough, but little sputum and tenacious. Diagnosis, pneumonia. (A one-eyed diagnosis.)

Doctor C., of Belview, is this doctor's patron saint in the treatment of pneumonia, who teaches that this is a self-limited disease, and all you can do is to guide the case and this is the general way he guides it. Treatment: Never mind the bowels, nature will attend to them, so the doctor neglects to "clean up, clean out and keep clean." He strives to control the fever with anti-

pyretic drugs and cold applications and, to be sure, fails. He protects the chest with a good cotton-wool jacket, gives strychnine in liberal doses to sustain the heart and nerves, gives internal antiseptics with a view to destroying the pneumococcus and neutralizing their toxins, directs plenty of water and proper diet. Result: Patient dies on ninth day. Autotoxemia and septic infection killed his patient. This doctor failed to make a full diagnosis, and failed to meet the paramount conditions. But he and the family had this consolation to comfort (?) them:

"Well, I followed the treatment laid down by our standard authorities; he has had the very latest up-to-date treatment known, and as he died, it is evident that he was bound to die."

This man, too, should have lived, and he would, had he been thoroughly cleaned out and kept clean and his circulation equalized; and then his fever could have been controlled, not otherwise. All of the above treatments, as directed by the attending doctors in the cases cited, may be very good for pneumonia. I do not know, but they proved dismal failures as good treatments for the patients.

Once more, and the last. Doctor called in haste to see a young man, 21 years old; robust, sanguine temperament; face cyanosed, very rapid, shallow and painful breathing; arms and legs cold up to elbows and knees; cold skin and "goose flesh" over all extremities; pulse 135, temperature 96°F., even the breath and tongue seemed cold. Total dulness over entire right lung, only bronchial sounds, no cough. Diagnosis: Acute congestion of right lung.

Treatment: hypodermic injections of atropine sulphate, 1-50 grain; strychnine sulphate, 1-15 grain; glonoin, 1-100 grain at once; repeated last two in fifteen minutes. Hot frictions and massage to arms and legs. In a few minutes the extremities were getting warm, cyanosis lessening, breathing easier; in one hour patient was warm, pulse 110, temperature 99°F., respiration nearly normal. Two hours later temperature was 102°F. For the control of the reactionary fever he

gave one granule of the defervescent compound No. 1, every thirty to sixty minutes. Gave apomorphine, 1-67 grain, emetine, 1-67 grain every hour to two hours to keep lungs clear. Covered chest all around with cotton-wool jacket; cleared out the bowels with calomel, 1-6 grain, podophyllin, 1-6 grain, every half hour for five doses; dessertspoonful of saline in cup of hot water every hour till the bowels began to act, beginning two hours after the last dose of the granules; then he kept them as clean as possible by the triple sulphocarbolates, two tablets (dissolved) every two and four hours; twenty drops of creosotal every three hours and a free diet of buttermilk. Patient recovered in three days. No textbooks relied on here. The *patient* was treated, the indications promptly met, hence this legitimate and logical result.

These are not hypothetical cases, but are real cases (names excepted) though somewhat abridged. It may be objected that some of the requirements are ideal. Even so. Every physician should have his ideal. He should place it so high that it would be his pattern, and so far ahead that it would be his guide; and as he develops and progresses and approaches his ideal he should place it still higher, and still further in advance, for when he reaches his ideal, it ceases to be an advantage to him. His ambition sleeps!

Brethren! What I wish to impress is this: that we shall be true physicians, not imitators; not even be satisfied to be "mere doctors." I rather fear that we have doctors many, physicians few.

I crave your clemency for having been so dogmatic. But true dogmatism is the result of knowledge gained by experience and often makes one bold, if not almost impudent.

ORVILLE H. WESTLAKE.

Lubbock, Texas.

#### THE SULPHOCARBOLATES IN ENTERIC TROUBLES CAUSED BY USE OF "ALKALI WATER"

Dr. Fremont E. Wood, Narco, Ariz., calls attention to the fact that small doses of the sulphocarbolates promptly control the in-

testinal irritation so frequently caused by drinking the so-called alkali waters found in the semitropical arid districts of the Southwest. As we have not been able to analyze a specimen of alkali water we are not able to explain how it is the sulphocarbolates prove so promptly beneficial. It is suggested by Dr. Wood that a septic condition promptly follows the ingestion of the alkali water. The sulphocarbolates in medicinal doses, here, as elsewhere, arrest bacterial development and prevent fermentation. We do not know that this is the correct explanation and are rather anxious to sift the matter to the bottom. If any of the readers of CLINICAL MEDICINE have had experience along these lines we shall appreciate their opinion of the matter. Under ordinary circumstances one would hesitate to give the sulphocarbolates in cases where intestinal irritation existed following the ingestion of an alkaline water and would be rather inclined to give dilute acids. Perhaps Dr. Wood's theory is correct after all, for certain bacteria propagate in an irritated and hyperalkaline intestine which would not otherwise prove troublesome.

#### PNEUMONIA

Here is a new case just off the ways, another one of those cases, perplexing, which spoiled a'bornin'. I had no doubt as to what it was until it was over. Then doubts actually arose in my own mind because of the remarkable results. Had the patient died, of course even the doubting prescribing galenics would have admitted an honest case of pneumonia. But here is the case.

Mr. P., aged 45, farmer, good habits. This man had the usual bad cold and functional disturbance for two weeks preceding February 14, when he had, soon after breakfast, a severe chill. At 3 o'clock that evening I found him delirious, pulse 120, temperature 104°F., breathing rapid and superficial, dulness over left lung, but little cough; cheeks flushed.

Treatment: Cleaned out with calomel and podophyllin, five doses of 1-6 grain

each, half an hour apart; after that, give antiseptic tablets every hour; defervescent granules every twenty minutes until pulse and temperature are reduced.

The next morning I found that the bowels had moved freely during the night. There was still some delirium. Pulse 110, temperature 102°F., breathing labored, sputa streaked with blood. I continued the prescription of the preceding evening, with the addition of hyoscyamine and emetine for restlessness. On the evening of the 15th, the pulse was 90, temperature reduced to 100°F., breathing easier but with pain in side. Stopped defervescent compound, continuing the other treatment, giving atropine and codeine for pain.

On the morning of the 16th the pulse was 92, temperature 98°F., breathing easy, air entering left lung. There had been profuse sweat in the night. I ordered the trinity granule every two hours and saline laxative to move the bowels. I called on the evening of the 16th and found the patient convalescent.

Thus in three days the severest attack of pneumonia seen by the writer this season was aborted, while many other cases are occurring in the same community. Dear Doctor, this makes our work so much more pleasant and effective, that though I am getting old I can't help a good deal of enthusiasm in it and to sorrow for the deaf ears of the many.

R. I. McQUIDDY.

Lawrenceburg, Ky.

[Let us congratulate you and at the same time assure you that just such results almost invariably follow precise medication. For instance, the writer's servant girl, a strong, healthy Swede, twenty-three years old, was attacked last Sunday with intense colicky pains, which she supposed to be of a dysmenorrhic nature, and retired to her bed. She was not examined, but the usual remedies for dysmenorrhea were exhibited during the latter half of the day. On Monday morning pains were worse, bowels obstinately constipated, and an examination revealed temperature, a foul tongue, marked

rigidity of the right rectus muscle and extreme tenderness over McBurney's point, together with the other classical signs of appendical involvement. The girl was warned that unless symptoms subsided in twenty-four hours operation would be necessary. The bowels were cleaned, alkaloidal treatment for appendicitis was instituted, and this morning, Tuesday, the abdominal walls are flaccid, temperature 99°F., pain has disappeared, with the exception of slight tenderness on deep pressure, and with another twenty-four hours' rest the girl will be ready to resume her occupation. Taken early, all these inflammatory conditions can be controlled, but a single false step may lead to disaster.—Ed.]

#### THE BUILDING OF EUSOMA

An excellent illustration of correct prescription building is shown in the preparation of eusoma. Dr. Chamberlain found echinacea being enormously used by country physicians, who exhibited a remarkable unanimity as to the great value of the drug and the use to which they put it.

He found that the remedial principle was best extracted by pure alcohol; the resulting preparation, however, was not miscible with water without the precipitation of the active ingredient. This was to a large extent obviated by the addition of boric acid. When this tincture was applied to wounds, however, it was found that it caused an exuberance of granulations, with resulting excessive scar-tissue.

Thuja had long been used as a local application in the treatment of wounds, and was believed to possess a power of contracting the arterioles and capillaries, lessening the blood-supply to the inflamed part. As it seemed to counteract this undesirable effect of echinacea, thuja was therefore added to the prescription; and the results of a very large number of experiments confirmed the correctness of this idea.

Baptisia is looked upon by many physicians as a very valuable internal antiseptic, and seemed to be, therefore, a useful ad-

juvant, to be employed to obtain prompter action in cases of general infection. This was therefore added so that the product might be equally valuable when given internally. It was believed that by the use of baptisia much quicker effect could be obtained than from echinacea alone, while the latter prolonged and confirmed the effect commenced by baptisia.

The result of these prolonged experiments was the preparation now known as eusoma. This may be news to those who think that such prescriptions are simply a heterogeneous muddle of remedies, supposed to act in a somewhat similar manner. It will be seen that each ingredient of this preparation was added with a definite purpose, and that this purpose was confirmed by prolonged experiments. As to the usefulness of the preparation, this is a question which each practitioner must decide for himself.

#### A CASE OF APYRETICAL TYPHOID FEVER

The following case is unique and rare and worthy of being placed on record. M. S., age 5 years, Brahmin by caste, was attacked with fever and cough on the 15th of October 1906. His father, a clerk in the District Engineer's office, sent for some fever-reducing and cough mixture. This relieved the cough, but the fever went on higher and higher, so that the father expected the boy to have typhoid fever, as his eldest son, age 10 years, and his nephew, age 13 years, had suffered from typhoid fever respectively two and five months previously.

I was called to see the boy on October 20, 1906, and found the following on examination; abdominal tympanites, gurgling around the umbilicus, about twelve or thirteen minutest vesicles (pearly appearance), tongue dirty-looking, its tip-edges glazed but center fissured and covered with dirty fur. Sordes on teeth. Temperature (armpit) 102.6°F.; pulse 96, bowels irregular; thirst excessive; anorexia marked; general aspect apathetic and listless. A

little delirious at night. Evening temperature, 104°F.

I reserved my diagnosis, but at once resolved to apply the "clean-up, clean-out and keep-clean" principles of Doctors Waugh and Abbott. I prescribed calomel, gr. 1-6, podophyllin, gr. 1-67, one granule of each every two hours for three doses, followed by 2 drams of saline laxative (Abbott) in 8 ounces of lemonade (warm), which brought out three very offensive stools in the night. Urine was high-colored and scanty.

On October 21 his morning temperature was 100.6°F., evening 101°F. Abdomen as before. Saline laxative and eliminant pills were given, and four stools passed—the last two being slightly yellowish but all offensive. Urine scanty. Perspiration *nil*. Water (warm) allowed *ad libitum*. Diet: rice water with salt and lime juice (fresh) every four hours.

October 22. Morning temperature, 98°F.; evening, 100°F. Two soft stools which were frothy and slimy and of yellowish tint and not very offensive. Diet as before. Prescribed the following: Ecthol (Battle), 2 drams; tincture of baptisia, 1-2 dram; sodium sulphate, 1-2 dram; savin, 1 grain; water, 3 ounces. Dose, 2 drams every two or three hours. Intestinal antiseptic (calcium, sodium and zinc sulphocarbolates, Abbott), half a tablet every four hours for four doses. Diet: Rice water and corn-flour congee every four or five hours.

October 23. Morning temperature, 99.6°F.; evening, 98.4°F. Four loose typhoid stools, vesicles extended to chest and neck. Gurgling still present. Tongue a little clear. The patient losing strength.

October 24. Morning temperature, 96.6°F., and evening, 97.2°F. Two pul-taceous dark stools, not very offensive. Mixture discontinued. Intestinal antiseptic four times daily. Patient was also given quinine hydroferrocyanide, gr. 1-6, and nuclein, gr. 2 every three hours for four doses. Diet as before.

October 25. Morning temperature, 96.2°F.; evening, 96°F. No stool. Patient very low and dull. (Sinking.)



October 26. Morning temperature, 96°F., and evening, 96.8°F. Patient dull and apathetic. Could not answer questions put to him, for two hours. Given triple arsenates with nuclein (strychnine arsenate, gr. 1-134; quinine arsenate, gr. 1-67; iron arsenate, gr. 1-67; nuclein, gtt 4), one granule every two or three hours for three doses, then one every four hours; intestinal antiseptic twice daily. Diet: rice water and coffee. The latter increased his urine a little.

From October 27 to November 2, 1906, his temperature ranged between 97° to 97.4°F. in the morning, and 97.4° to 98.2°F. in the evening. He passed one or two stools daily, which were healthy looking. Diet as before, but parwar (*stereospermum suaveoleus*) soup with salt and pepper added. Triple arsenates, nuclein, and intestinal antiseptic (also saline laxative) continued at longer intervals.

The boy began to improve from the 30th of October. His temperature became normal on the third of November, when he was given soft-boiled rice in addition to rice water and parwar. The vesicles nearly faded, but urine still was scanty and colored.

He was given triple arsenates with nuclein, one granule after each principal meal twice daily, and brucine, gr. 1-134, and quassin, gr. 1-67, one granule of each before the morning and evening meal (twice daily). In a fortnight he regained his health and by and by was allowed solid foods.

Remarks: What was the apyrexia due to? I think it was due to the faulty action of the kidneys and consequent retention of typhotoxin. The boy was very low and sinking on the 25th and 26th, when he had no stool. I have treated 65 cases with but one death (after only eleven hours after my treatment). I always apply the "clean-up, clean-out and keep-clean" principles of Drs. Waugh and Abbott, and with good results. I never allow milk in any shape to my patients, as I found it to produce injurious symptoms, tympanites, diarrhea, anorexia, etc., with gripings. I

have always found the saline laxative indicated, also the intestinal antiseptic.

There can be no doubt about the diagnosis, as the father of the boy subsequently contracted the same disease as had his brother and cousin. I have treated hundreds of cases of typhoid fever while in government service in Ragpusana where the disease is prevalent. Mutton soup only increases thirst. I never prescribe alcohol in any disease and have no cause for regrets. None of the patients complained of any depression on account of two or three loose motions produced by calomel, podophyllin and saline, rather they felt refreshed and brighter.

THAKUR R. D. SINHA.

Motihari, India.

[This case is interesting. What think our readers?—ED.]

#### ACUTE GASTROENTERITIS

There can be no question that the more serious forms of enteric disease can be avoided to a great extent (and controlled promptly and positively when they do present) by modern methods of medication. Many of the cases of "summer diarrhea" which terminate fatally could have been easily controlled in their early stages. Even cholera infantum in its typical form (which after all is rarely encountered) will yield readily to proper therapeutic measures during the first twenty-four hours.

Children who have been prone to looseness of the bowels, during the months of July, August and September, are, under the care of the well-informed practitioner, enabled to pass from spring to winter without any marked disturbance of the alimentary tract. A certain increase in the number or altered consistency of the stools is to be looked for when the fruit season arrives, and with the advent of spring and "green things to eat" the average human being finds his bowels moving more freely. This is desirable and normal. Two or even three loose stools per day should not be regarded as pathological, but at the first sign of enteric disorder—

colicky pain, frequent passage of thin, watery or pasty, stinking stools—treatment should be instituted.

The doctor should impress upon his clientele the positive necessity for prompt treatment. He should especially explain to young mothers the importance of an early recognition of acute enteritis, pointing out the fact that in many cases life has been sacrificed simply because the doctor arrived too late. Often the little patient, stricken twenty-four or thirty-six hours prior with acute gastroenteritis (or cholera infantum), will succumb to cerebral congestion after diarrhea has been checked and other distinctive features of the disease eliminated. Others pass into the sleep that knows no waking from sheer exhaustion, within the same period. If early and correct treatment is called for more urgently in any one disorder than another it is in acute gastroenteritis.

This disease is very commonly and mistakenly termed cholera infantum, the latter being an entirely different and much more serious malady. The writer has not seen half a dozen cases of true cholera infantum in five years. Acute gastroenteritis is, however, omnipresent. The symptoms vary in severity and are known to every practitioner. The bacteria discovered in a given case may be numerous—streptococcus, the colon bacillus, staphylococcus, bacillus proteus and, pyocyaneus, etc.—any one or a variety of these microorganisms being distinguishable in the stools. As, under medication, the frequency of the latter lessens, the severity of the symptoms moderate.

Two forms of the disorder are recognizable, one mild, the other severe.

In the first case the child (who may be teething) shows signs of malassimilation: food passes through the bowel imperfectly digested, accompanied by much gas, and attacks of vomiting occur. After a day or two the vomiting and stools become more frequent, the latter bearing either a greenish brown slime or consisting of a greenish or dirty-gray fluid.

Still later there may be much mucus streaked with blood. The smell of such

stools is most offensive. Throughout, the child is fretful and complains of cramping pains, or, if too young to do this, draws its legs up and screams. The skin is hot and usually dry and the temperature in mild cases rises one to two degrees. Occasionally vomiting is altogether absent; in others diarrhea does not appear for some hours after vomiting and other evidences of gastrointestinal inflammation.

In the severe forms all these conditions are accentuated. The temperature may reach 103°F., and as many as fifteen or twenty stools be voided in the twenty-four hours. I have noticed that such cases usually begin with obstinate vomiting and the passage of one or two stools containing much undigested food. The vomitus at first contains sour food-material and later is a foul fluid containing mucus and bile. As the child is extremely thirsty and craves for water, the abundance of the fluid can easily be accounted for.

This disease affects alike the bottle- or breast-fed infant and the child on mixed diet. While improper feeding is without doubt the usual cause, heat and bacterial invasion of an exhausted system are alone responsible in many instances.

The disease must be looked upon as mildly infectious and the stools and vomited matter should be carefully disinfected. The affected child may gradually waste and become almost a skeleton or, after a few days, the disorder abating, recover rapidly. In very marked cases death may take place within forty-eight hours. In some cases two or more such attacks occur in the one season and not at all infrequently enterocolitis sets up.

*Treatment.*—Knowing, as we do, that the whole chain of symptoms is due to the presence of undesirable material and bacteria and that no gross pathological lesions exist, treatment is really simple, but to be effective it must be of a positive character.

As in cholera nostras, we have to get rid, as fast as we can, of the fermenting, germ-breeding, toxic bowel-contents. Further, being aware of the presence in the rugæ of the intestine of millions of pathological

microorganisms, we must not put into the alimentary tract material favoring germ-propagation. We must also exhibit in effective doses intestinal antiseptics of an astringent character.

The first step is to stop all food and wash out the lower bowel with either a plain, cool, salt or mildly alkaline antiseptic solution. If the vomiting is marked pass a catheter into the stomach and wash it out; as this is not always feasible, give a mild solution of magnesium sulphate slightly acidulated and sweetened with saccharin. Saline laxative (alkaloidal formula), one small teaspoonful to the half pint of water, works perfectly. It is well to give gr. 1-10 to gr. 1-6 of calomel and gr. 1-12 to gr. 1-67 of podophyllin half-hourly for four to six doses, according to age of child, to secure a thorough emptying of the intestine and increased hepatic activity. This is the first thought". One dose should be given before anything else is done and the physician himself (unless a competent attendant is present) should then give the enema. One hour after the last dose of calomel, exhibit a fairly full draught of saline laxative. This serves to flush the already cleaning intestine and leaves the mucosa in good condition to withstand bacteria and absorb such nutritive material as is allowed.

During this time, if the skin is hot and dry, have the child sponged hourly and covered lightly with a thin flannel garment. It is to be kept in a cool, shady place. Barley water, made thin, will prove the best drink at this period. Every two hours at least one grain of the combined sulphocarbulates of lime, sodium and zinc should be given—preferably in solution. A mentholated saccharinated tablet is obtainable which serves excellently. In bottle-fed infants this solution may be given from the bottle, as also may the laxative saline draughts. In older children, the powder, mixed with a little sugar of milk, may be given on the tongue and a drink of boiled (or barley) water follow.

Very minute doses of atropine (or hyoscyamine) are of great service during the first day: gr. 1-250 may be dissolved in six

teaspoonfuls of water and a teaspoonful given every two hours. If this treatment is carried out, the next day will reveal a recovering patient. But here care means everything: the sulphocarbulates must be continued, the lower bowel flushed and the mouth kept clean. Albumen water, barley water containing a few drops of fresh beef juice, or a few spoonfuls of a well-cooked cereal gruel may be given. Zwieback is safe and well liked by most children. Under ordinary circumstances this diet may be slowly but surely added to until normal feeding again prevails. Brucine, gr. 1-134, or hydrastin, gr. 1-6, may be given as a bitter tonic for a few days. It is also a good plan to institute about the fourth day another course of calomel and podophyllin; or in place of the latter iridin, gr. 1-6, may be given hourly for four hours. If the stools are markedly offensive and clay-colored add bilein, gr. 1-12, to every other dose. The effect is immediately noticeable.

In a few cases hyperacidity is marked; here calomel and soda (aa. gr. 1-4) acts rapidly. Should the condition persist, a few doses of "neutral cordial" will promptly prove corrective.

It should not be forgotten that in all these cases more or less local congestion exists; atropine is our best remedy for localized congestion, bringing, as it does, the blood to the surface. Moreover, this drug stops the excessive secretion of mucus—another desirable feature. It is always well to give fairly full doses of atropine *at once* when the skin is cold and pale; cactin and brucine (aa. gr. 1-67) will perhaps prove the best subsequent stimulants.

If the disease has progressed and weakness is marked, nuclein is strongly indicated; six to eight drops should be given under the tongue thrice daily. It is in these cases, too, that rectal injections of beef juice and starch water prove so valuable.

In those cases where the system has been deprived of large amounts of serum, enteroclysis is imperative, and here decinormal salt solution with two drams of prepared blood to the pint proves especially very valuable.

It is well in all well-marked cases to give thin, clear beef- or chicken-bouillon for the first day or two after normal conditions are restored, returning to milk very gradually.

GEORGE H. CANDLER.

Chicago, Ill.

[The preceding article is reprinted from Dr. Candler's excellent little book, "The Every-day Diseases of Children." This article is peculiarly timely and that is the reason why we give it space now, but the whole book is full of the most practical and helpful matter and any up-to-date doctor will find it helpful. During the summer months, when the little ones are so prone to illness, a book of this kind is of special value. The price of the book is \$1.00. It can be obtained from the publishers, The Clinic Publishing Company.—Ed.]

#### DANGER TO DOCTORS

The writer remembers seeing, in his boyhood, *The Police Gazette* once. There was a picture of a doctor in his overcoat and silk-hat, with a woman in his arms, just turning to put her in bed. A man, her husband, enters the door, and seeing the position of the parties, whips out a revolver and shoots the doctor dead.

The doctor had been sent for to see the sick woman and had found her alone and unconscious on the floor. He at once addressed himself to placing her in bed. The husband who had been absent and did not know of his wife's being ill returned unexpectedly, with the tragic result related. This is not alone an instance of the danger to which doctors are subject but also of the danger of men being always armed for committing murder. If that man had not been so armed, thirty seconds would have been sufficient to have cleared up the matter. The picture made a lasting impression on me, and it is a wonder that I ever studied medicine. Contagious diseases, bad weather, night rides and highwaymen do not seem to be the greatest dangers with which doctors have to contend, but it is women—designing, malicious women, disgraced,

about to be disgraced, or else desiring to be.

One of Detroit's reputable doctors recently had an experience enough to make one shudder. He was called, once, to see a woman he had never met before. He found her suffering with a slight cold for which he prescribed and left. A week later she was taken to the hospital suffering from an abortion. Death imminent, the last sacrament having been administered, the prosecuting attorney and his stenographer being present, she made a dying declaration that this doctor had committed an abortion on her. She did not die. A month later the case came to trial and instead of her antemortem statement the woman herself was on the stand. On severe cross examination she admitted that the doctor knew nothing at all about her condition nor had he committed an abortion on her. She said she thought that she would be sent to prison if she did not blame someone else for the abortion.

We should have ample laws making it a crime to solicit an abortion and better to protect physicians from blackmail. Surely the crime is as great as to solicit or offer a bribe. It seems customary among women who have abortions performed upon themselves, when pressed for an answer, to accuse some doctor who did not do it, and more often the one who refused to do it.

Dr. Leo Danziger, of Cincinnati, born 1871, graduate of Medical College of Ohio 1892, member of the Cincinnati Academy of Medicine and the Ohio State Medical Society, was shot and killed while at the bedside of a patient recently. The patient was a young girl fourteen years of age. A criminal abortion had been performed on her and the doctor was called in and found her in a critical condition. The girl had been brought to Cincinnati from West Virginia by her uncle, who was with her. He was extremely anxious about the girl and had words with the doctor about his treatment. He had asked other doctors to supersede him in the treatment but they had refused to do so. The extreme anxiety of the uncle was explained by developments

which proved that he was the author of the girl's trouble. This was evidently known to the doctor, and either to put him out of the way and hide his crime, or from some words, the hot-headed mountaineer whipped out his ever-ready weapon and shot him.

E. S. MCKEE.

Cincinnati, O.

### "PROFOUND" CRITICISM FROM A NIHILIST

DEAR DOCTOR ABBOTT:

I wrote you some days ago asking about the quantity of cactin in your tablets. I did this not because I had any intention of using the tablet but simply because I wished to be correct. A doctor reported me a fatality in which he stated that your tablet contained one-sixth of a grain of cactin, and it occurred to me that this could not be correct. Of course it should have been one sixty-seventh of a grain.

I am not especially interested in alkaloidal products or in THE AMERICAN JOURNAL OF CLINICAL MEDICINE. I meet entirely too many physicians who are so thoroughly dyed-in-the-wool givers of alkaloids that I have come to the conclusion that a Christian scientist or an old-school homeopath is a mild individual in comparison to a long-time reader of the old ALKALOIDAL CLINIC and of the present CLINICAL MEDICINE. They are all enthusiasts, they are all absolutely sure, and they all regard with mild contempt the man who has not learned the great truths which were expounded in THE ALKALOIDAL CLINIC.

I wish to thank you for the very courteous reply to my note, but I am sorry that you sent the samples. You know as well as I do that "results" go for very little when obtained by a country doctor like myself; there never was a man engaged in the practice of medicine and who did the most outlandish things but who boosted himself with the idea that he was "getting results." Instead of results being due to the drugs which he gave or to the things which he did, they were due to the *vis medicatrix naturæ*, or the other fact "that sooner or

later all diseases end or get well as God Almighty pleases." I told you on a former occasion that I had no desire to measure lances with a man who wields a pen as fertile and facile as you do, but all attempts to interest me in CLINICAL MEDICINE are sure to be just as futile as were efforts to interest me in THE ALKALOIDAL CLINIC.

[This letter (signature omitted) comes from a man who stands high in the counsels of the profession in his state; he is a graduate of several medical institutions and has spent several years in study abroad. While rating himself as a "country doctor," he is surgeon for several railroads and other corporations. I simply state these facts that you may put a proper estimate upon the value of his arguments, understanding their source—for we do not feel free to use his name on account of his unwillingness to "measure lances" with us. Moreover, not understanding these facts you might (judging again by his arguments) make the mistake of classing him with ordinary "cross-roads" doctors who haven't advanced (?) so far that they can look upon "results" with indifference. Thank God for that!]

I am glad that the doctor admits that the long-time readers of CLINICAL MEDICINE are "all enthusiasts." Now there is a reason for all things. Why are they enthusiasts? It would seem that being presented with a phenomenon which he did not understand the truly scientific man, such as we believe this doctor to be, would endeavor to solve the enigma. To assume that we have "hypnotized" some 40,000 or 50,000 men is drawing it a little strong. Isn't it really more rational to believe that we have helped them, a little at least, and that this is the explanation for their warm affection for CLINICAL MEDICINE and what it stands for?

The rational thing to do, instead of pooh-poohing and decrying something which you *refuse* to consider at all is to give a little time and careful thought to investigating it in practice, just as I presume you did antitoxin when it came out, or as you are probably doing now with opsonins. You would find that we are hammering away,

all the time, at certain fundamental and eminently practical facts—and that these facts are taking root in the consciousness of the profession. They *do* help men to get results. There's no guesswork about it.

As for "results" going "for very little when obtained by a country doctor." My dear Doctor, do you appreciate how absurd that statement is? Why is it that the country doctors are thronging the post-graduate schools, attending the medical societies, buying books and subscribing for medical journals? Because they know all this helps to get "results." Any man who believes that all this is vain and useless and that only the "*vis medicatrix nature*" or the surgeon's knife can offer any relief from human suffering has no business in our profession. He should get out at once—or go over to Christian science, being a long ways nearer to it than we are.

The trouble with men like our critic is, that having imbibed a little of German scholarship and a good deal of the superciliousness of their circumscribed knowledge, they condemn, in their ignorance, many things which might be of service to them but which they are too high and mighty even to look into. We *challenge* this man to investigate the active-principle methods.—ED.]

#### A CRITICISM OF DR. REBER'S PAPER BY SOLLMANN

In *The Journal of the American Medical Association* for May 9 Dr. Sollmann, a member of the Council of Chemistry and Pharmacy, admits that he endeavored unsuccessfully to suppress Dr. Reber's paper on "Hyoscine and Scopolamine" (which is discussed in our editorial pages of this issue), and prevent its publication in that journal. Nobody is surprised at this admission. The inexplicable thing is how Simmons ever permitted the papers to see the light. Of the merits of Dr. Sollmann's attempt to discredit Dr. Reber's paper the reader may judge by the following item: "The problem which Reber tries to investigate is a strictly chemical one." Further along, speaking of the identity of scopolamine

and hyoscine, Dr. Sollmann says: "I have not myself done any work on the subject."

Dr. Sollmann's attempted reply does not in any manner meet the evidence adduced by Dr. Reber. In fact, it only goes to confirm the impression made on us by Reber's paper, that the latter was a bomb-shell thrown into the camp of the enemy. Dr. Sollmann meets the difficulty by assuming that Merck & Company did not tell the truth as to the source of the hyoscine supplied to Dr. Reber, that their statements were unworthy of credence and their goods of confidence, and that when Dr. Reber said he used equivalent quantities of the two solutions, he did not. In fact, Dr. Sollmann's evident state of mind while inditing this attempted reply may be summed up in the one word, consternation.

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#### WE SHALL KEEP OPEN HOUSE!

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During the meeting of the A. M. A. in Chicago, June 2 to 5—and after—we shall keep "open house." Every reader of CLINICAL MEDICINE who may be in attendance upon that great meeting simply *must* "make our house their home." We are now in our splendid new building. While we are not as nicely fixed as we shall be a few weeks from now, we are proud of our quarters and want to share our pride with our friends. Come, and bring along your friends!

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#### SUMMER-TIME REMINDERS

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Now is the time to be making preparations for the summer campaign. Get ready. Lay in a stock of the remedies you are most likely to need. Read up on the diseases you may be called upon to treat. Most important, put away in your cranium these elemental principles which mean so much in the treatment of *all* disease, and which are especially worthy of emphasis in the summer season—"clean out, clean up and keep clean."

But here are a few things which it may be worth your while to keep in mind.

Remember that the digestive tract is the *fons et origo* of 99 percent of the diseases

peculiar to the summer months. Advise simple, easily digested foods; forbid all kinds of "stuffing" and let your patrons understand that an overfed baby may be a dead baby.

Remember that the bowels should be carefully attended to. Both constipation and diarrhea are danger signals, especially with infants.

Remember that the ideal laxative for the summer months is the saline, especially in effervescing form. Not only does it act quickly, getting rid of toxic waste in the minimum of time, but it is refrigerant—peculiarly so for the summer time.

Remember that an infant with foul-smelling stool responds quickly to 1-10 grain calomel, and with aromatics they veritably "cry for it."

Remember that the best way to give salines to the little ones is in the form of lemonade. Use the effervescent preparation and sweeten to taste.

Remember that you should never "tie up" the bowels when there is a foul-smelling stool, even if you have a case of diarrhea. First get busy with your calomel (four or five doses, 1-6 grain) at half-hour intervals, followed by the saline. Then "sedate" with your narcotic, using just enough. The "chlorodyne" does the work.

Remember that the green, acid stool is a sign of intestinal fermentation. After the cleaning out use a simple alkali, as provided in the "neutral-cordial" combination—an old and valuable eclectic preparation.

Remember that an attack of "colic" may not necessarily be due to "green apples." In a baby, clean out the lower bowel with a warm-water enema, administer a quickly and easily acting laxative and give a granule or two of Waugh's anodyne. This treatment will turn a cry into a smile. If the "colic" continues, look for something more serious—possibly the trouble may be intussusception.

Remember that many an attack of "colic" is really the beginning of an appendicitis. Therefore, examine every case. If the symptoms point toward appendicitis, administer small repeated doses of hyoscyamine

and strychnine arsenate, adding glonoin if there are signs of shock. If improvement is not prompt, get ready for an operation.

Remember that the "colic" may be due to gallstones. Use the remedies just advised and then prepare to *cure* with sodium succinate.

Remember that for most forms of cramping intestinal pain the "chlorodyne" granule does the work nicely.

Remember that a baby that cries a good deal may need no medicine—just be hungry. Have the baby weighed every week and direct the parents to report the results to you.

Remember that for restlessness and irritability of young children Candler's calmative is the indicated remedy.

Remember that the sulphocarbolates come into play in practically all the summer ailments, whether the patient be young or old. If the stool is foul, "clean out" and then give the intestinal antiseptic.

Remember that in the feeble digestion, associated with the relaxation of the hot months, very frequently a few drops of hydrochloric acid help to straighten things out.

Remember that "cleanliness is next to godliness"—and that it's a life-preserver in the summer.

Remember that a large share of the typhoid fever is caused by the use of infected milk. In a part of Chicago *right now* quite an extensive epidemic has been traced to a single dairyman and a single farm.

Remember that flies are a "common carrier" of disease-germs. Keep them out of the house. Tell your patients if they want to save on the doctor's bill they must provide screens.

Remember that alcohol is worse than useless at any time and that in the summer alcoholic drinks are positively harmful, no matter how seductively cool they may be.

Remember that the doctor should take an active part in the warfare against the saloon that is now being so actively waged. No man should know of its dangers more than he.

Remember that tainted food may cause ptomain poisoning. In any case of sudden and severe illness, with diarrhea, vomiting and severe physical depression, be on the lookout for bad meat, cheese, fish, etc.

Remember that the treatment for ptomain poisoning is to unload the bowel with enemas, as quickly as possible, the stomach with the tube and the upper bowel with calomel and salines. Give glonoin on the tongue, atropine and strychnine hypodermically, "to effect," apply warmth to the extremities and support the heart with digitalin. As soon as the stomach will retain it, commence with the sulphocarbolates.

Remember that there is a difference between sunstroke and heat-exhaustion. In the former there is high fever, even to 107° and 108°F., a full, bounding pulse, congested face and eyes; in the latter there is less elevation of temperature (which may be subnormal), the surface is cold, pulse feeble and thready, great physical depression. In the former reduce the temperature by cold baths with friction, using the defervescent compound internally; in the latter, stimulate, using glonoin, strychnine arsenate and hyoscyamine, the last two hypodermically if an emergency exists. Apply heat to the body.

Remember that this being the summer time it is also the rest season and that you should hie you away to seashore, lakes or mountains and fish, play and rest.

Remember, too, that this is a good time to drop in and see us. We are now in our new home—and it's a dandy.

Remember that the A. M. A. meets in Chicago June 2, and that this is your opportunity to make us that long-promised visit. Don't miss it!

Remember also that with the leisure from work comes the opportunity to "post up" on the things you promised yourself to investigate, when you "had time."

Remember that there is no time like the present to lay in a stock of the books which will help in your everyday work—and that for this purpose there are none like "our kind"—those which teach alkaloidal therapy.

Remember that we would appreciate an article from your pen upon some summer disease for publication in the July or August numbers of this journal. Let us make those two numbers just as helpful as we possibly can. It's your journal; you share the responsibility for the degree of its helpfulness with us. Will you sit down *now* and write us your own experience, about the kinks and twists that have helped in your own practice?

Brethren, help us to make CLINICAL MEDICINE better! Do your share. Will you? We want your help—all you can give us, along every line. Help us by paying up your subscription. Why not a couple of years in advance? Send us \$5.00 and we'll put your subscription down for *three years*—provided you *act at once*. Help us in the fight for a truer therapy, to resist the forces which are using every effort to overwhelm us. We stand for *you*, brother doctor, will you stand with us?

W. C. ABBOTT.

Chicago, Ill.

#### STICK TO THE HORSE

Regarding the items which have appeared about automobiles, may I add my experience. I have tried both the horse and the auto, and from my trials and tribulations with a new Maxwell runabout I would say to every physician who does not want nervous prostration, stick to the horse by all means—unless he can hire an expert machinist and chauffeur to look after his machine. Too often we hide our failures and we hear nothing but the good side of the auto. If we can hear of some of the failures it may save a brother physician much vexation, loss of time, and incidentally a large hole in a slowly increasing bank account.

A word of advice to one who does buy a machine. Be sure that printed agreements in catalogues are not worthless. Have your agreements regarding repairs, etc., written out and signed by the one from whom you buy your machine.

J. WILFORD ALLEN.

New York, N. Y.





## CLINICAL · MEDICINE POST-GRADUATE SCHOOL *of* THERAPEUTICS

George F. Butler, M. D., Director  
Thomas J. Mays, M. D.  
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.  
William F. Waugh, A. M., M. D.  
Alfred S. Burdick, A. B., M. D.

### PART I.—LESSON SIX

#### CLASSIFICATION AND THERAPEUTIC PRINCIPLES

The work thus far covered in the Post-graduate Course has been introductory—simply leading up to our main study, which will be that of remedies as applied to the treatment of disease. We shall endeavor to approach this study from an angle somewhat different from that usually employed.

We wish to group our remedies and consider them together *from the standpoint of employment*; or to put it somewhat different, we wish to make the *things to be accomplished*, the disease-indications, the basis of our future work.

Now, the question naturally arises, How can we so subdivide or classify these disease-indications that we can go about the matter rationally? We can think of no simpler and more direct method than to adopt as our classification the “therapeutic principles” so familiar to the readers of CLINICAL MEDICINE.

We shall, accordingly, subdivide all of therapeutic practice under the following heads:

1. Elimination.
2. Nutritional balance.
3. Asepsis, local and general.
4. Circulatory equilibrium.
5. Innervation.

At first thought you may say that all of medical practice can not be covered under these heads, and technically you probably are correct. But from a practical point of view we believe that the ground is very fairly covered. Think a moment and see if this is not the case. In every case ask yourself these questions: Are my patient's eliminative organs working properly? Is he receiving proper food, digesting it well, absorbing and using it? Is there any infection, past or present, local or general, which I should consider? Are the circulatory organs functioning properly? Is the nervous system sound?

We lay it down, therefore, as a fundamental consideration *in every case which you are called upon to treat*, that you take thought of these five points. Go over them on your fingers if you prefer and apply them to the case in hand. Never let them slip out of your consciousness. We shall hammer away, and keep on hammering, at these things.

#### ELIMINATION

We begin with elimination, for this is the “corner stone” of successful therapy. As you know, elimination goes on through

the bowels, kidney, lung and skin. We shall commence our study of disease-indications in that order. Commencing, therefore, with next month's lesson we shall begin the study of remedies acting upon the bowels, both to increase and decrease its activity. But first let us outline certain general considerations.

**The Significance of Excretion.**—Stewart in his "Manual of Physiology," says: "In a body which is neither increasing nor diminishing in weight the output must exactly balance the income, and all that enters the body must sooner or later, in however changed a form, escape from it again. In the expired air, the urine, the secretions of the skin and the feces by far the greater part of the waste-products is eliminated. Thus the carbon of the absorbed solids of the food is chiefly given off as carbonic acid by the lungs; the hydrogen as water by the kidneys, lungs and skin, along with the unchanged water of the food; the nitrogen as urea by the kidneys. The feces represent chiefly unabsorbed portions of the food. A small and variable contribution is that of the expectorated matter and the secretions of the nasal mucous membrane and lachrymal glands. Still smaller and still more variable is the loss in the form of dead epidermic scales, hairs and nails. The discharges from the generative organs are to be considered as excretions, with reference to the parent organism, and so is the milk and even the fetus itself with respect to the mother."

We have for a long time been familiar with the gravity of imperfect nutrition, but are not equally intimate with the still graver subjects of defective excretion and the evil effects of imperfect elimination. It is not merely that life soon becomes extinct if the different excretory organs of the body are not carried out—a method of destroying life, much more rapid in its action than the withholding of ingesta—but it is also the more chronic action of imperfect elimination which is fraught with grave issues.

**Egestion and Ingestion.**—The importance of the functions of egestion as com-

pared with those of ingestion was insisted upon by Marshall Hall in 1842. The system is soon poisoned when it cannot get rid of its own carbonic acid. The excreta of the urine are powerful nerve-poisons, causing coma and convulsions, while bile is equally destructive to life, in large quantities. It would appear, indeed, that the assimilation of food is accompanied or followed by the production of principles of a preeminently destructive character, either as injurious products of the food taken when split up, or as waste-matters, the result of histolysis. Very grave, indeed, are the questions relating to retrograde metamorphosis within the organism. Especially is this the case with nitrogenized principles. These nitrogenized matters do not merely go toward tissue-formation and then, by a process of oxidation, pass from one form of histolytic product to another. They do not break up in tissue-destruction into creatin, creatinin, tyrosin and other early products of tissue-decay and then pass on into uric acid and urea merely; each form being, in large amount, a dangerous poison. They also form within the animal organism ferments which exercise no unimportant function.

**Digestive Principles.**—Pepsin, so powerful a ferment in the production of the digestion of albuminous matter, is a secretion, and in so far an excretion of the stomach by means of its follicles. Ptyalin is the ferment of saliva, very effective in the conversion of starch into sugar. Pancreatin is another albuminous ferment, formed in the pancreas, also possessing marked power as a digestive agent. These different products are in so far excrementitious, that they are thrown out of one part of the system, and yet they are most effective in promoting digestion by their action upon the material which is furnished as food. These excretions are valuable digestives and ferments.

The salivary, the gastric, and the pancreatic fluids all contain an animal principle closely allied to albumin; but this principle seems to be in a state of change or of incipient decomposition, and it is not im-

probable that while this very condition renders the albuminous matter useful in promoting the solution of the aliment it renders it unfit to be retained within the circulating current.

There are also albuminous ferments scattered through the body which cause, it is believed, the changes which give us our body-heat. The glycogen stored up in our livers and there converted into sugar, is broken up into lactic acid, and this acid, uniting with the soda of the blood, is gradually oxidized. The oxidation of the lactic acid of the lactate of sodium causes our body-heat. The production of waste-matters in excess by the action of these ferments, when overactive, is a matter just coming within the range of our physiological vision. There are all of the indications enough to give us grounds for good expectations from it.

Along the gastrointestinal canal there are established a series of excrementitious activities resulting in the production of numerous albuminous products which are also excrementitious, and which are very useful in the elaboration of our food. Though varied, they possess much action in common. That is, along the digestive tract the primitive tegument has undergone such modifications as to excrete, or secrete, a series of products which fulfill no unimportant function in the process of assimilation. And yet these excretory organs give off other products when the system is charged with them; products too far advanced to possess any nutritive power, and being simply active poisons.

In addition to its other functions the intestine, as is well known, eliminates a variety of substances from the body-fluids. It thus eliminates in the form of organic salts phosphorus, iron, calcium, and so on. To a less extent it also excretes nitrogenous and fatty, or fat-like, bodies.

**Intestinal Autointoxication.**—Bouchard and his pupils promulgated the doctrine of intestinal autointoxication. It is well known that the intestine is the only internal organ in which from the day after birth onward bacterial decomposition takes place

continuously without the body suffering any necessary harm. The chemical processes that occur in the decomposition of the chyme consist in fermentation of the carbohydrates, putrefaction of the protein, and conversion of the fats into the lower fatty acids. Of these the last is of least importance.

*Fermentation of carbohydrates* takes place normally, both in the lower part of the small intestine and in the colon. *Putrefaction of protein*, on the other hand, occurs exclusively in the large intestine. The ileocecal valve forms a sharp line of demarcation, above which putrefaction of protein never occurs, except under pathologic conditions. In the cecum and ascending colon, which are the sites of most active decomposition, both fermentation and putrefaction take place together; the latter afterwards outruns the former, to decrease again in the last portion of the colon, where the feces become inspissated. In correspondence with this it follows that the fecal bacteria which flourish abundantly in the cecum gradually diminish in numbers further down.

The *products of fermentation* consist of gases, volatile fatty acids and lactic acid. They are for the most part absorbed by the intestinal wall. The gases are excreted again with the air expired by the lungs. The fatty acids are either oxidized and expired or eliminated unchanged in the urine. The fermentation-products that are not absorbed are excreted either mixed with the feces or as flatus. *Putrefaction of protein* produces ammonia, sulphureted hydrogen and other gases, and also a number of characteristic bodies, such as aromatic oxyacids, phenol, indol and skatol. These are also absorbed by the intestinal wall. The gases are expired. The other substances are either excreted in the urine as compounds of sulphuric or glycuronic acid or to a variable extent remain in the feces.

**Results of Autointoxication.**—Keller has suggested *acid intoxication from the intestines* as a cause of the extreme *wasting of infants* with diarrhea and vomiting.

*Diarrhea* is sometimes associated with an increase of intestinal decomposition.

Bouchard and Hanot regarded the increased size of the liver, which can be frequently demonstrated in conditions of chronic dyspepsia, as a consequence of intestinal intoxication. In this they rely upon experiments made upon animals by Boix, who claims to have produced *cirrhosis of the liver* by administering for a prolonged period food containing acetic acid and butyric acid.

Of all the blood-diseases *chlorosis* and certain forms of pernicious *anemia* are closely related to decomposition in the intestines. As is well known, chlorosis is frequently associated with a tendency to constipation, and this symptom—or, rather, the hypothetical decomposition-processes which accompany it—is, according to many, the fundamental cause of the disease.

The clinical coincidence of gastrointestinal troubles and *skin eruptions* must also be admitted.

Most of the symptoms which clearly result from the effects of intestinal decomposition are displayed by the *nervous system*. They are of the most varied kind. At one end of the series there is simple headache; at the other coma, convulsions and collapse. The more usual forms may be considered under the headings: first, the general phenomena observed in cases of severe constipation; second, tetany; third, epilepsy or eclampsia; fourth, psychoses.

The general phenomena observed in cases of severe constipation include the nervous symptoms seen in chronic, habitual constipation: feelings of being out of sorts, lassitude, headache, giddiness, neuralgia, ill-humor, and so on. Decomposition in the stomach is probably the most common cause of tetany. Epilepsy and eclamptic conditions have sometimes been associated with marked acetonuria. On this ground Von Jaksch and Lorenz, in particular, have suggested intestinal autointoxication as their cause. Of late years in France there has been considerable discussion upon the connection between intestinal decomposition and psychoses. Out of these has crystallized the now generally accepted doctrine of "visceral psychoses."

**Causes of Constipation.**—One way of overcoming intestinal autointoxication is to overcome constipation, and constipation, as Thompson says, when not dependent upon some gynecological ailment, is generally due either to deficient action of the small intestine or to deficient action of some part of the large intestine. Deficient action on the part of the small intestine is due to two causes: first, deficient secretion; second, want of innervation, or want of muscular action.

Constipation dependent upon deficient secretion is quite distinct from that caused by want of muscular action. But in many cases both causes will be operating simultaneously.

Deficient secretion in the small intestine may be caused by some disturbance of the liver. Constipation, therefore, may date from the time when the patient suffered from some severe form of fever in which the liver was prominently involved, such as the bilious remittent; or it may follow an attack of tropical diarrhea, which is almost invariably accompanied by marked hepatic disturbance. In such cases the patient does not have an extraordinary fecal accumulation and impaction, but there is, instead, a sluggish action of the bowels, and he is usually obliged to take medicine once in four or five days to bring about a movement; and when it does occur, the evacuation is moderate and quite dry. This kind of constipation is quite common in the Southern States as a consequence of the diarrhea which prevails in that latitude; and it is also frequently seen in the Northern States as the result of malarial poisoning.

The symptoms are extremely negative, except the constipation. The one symptom which perhaps gives the patient most discomfort is the tendency to a dull, indefinite headache. In a majority of cases this is located in the posterior part of the head and is rather an uncomfortable sensation than a real pain, and it is best relieved by something which promotes a free discharge of bile. The tongue usually is small, not large and flabby, generally a little reddened along the edges and tip, and the secretions

of the mouth are commonly viscid. The condition of the mouth is the indication of the condition along the entire alimentary canal. We have, therefore, evidence of the presence of only a moderate amount of secretion in the intestinal tube, and our treatment should be regulated accordingly.

**Treatment of Constipation.**—If, for the relief of this condition, mild cathartics be administered, the condition of the case will be aggravated, because the temporary stimulus afforded by them, however mild, is immediately overcome by the tendency to deficient secretion. Active purgation produces a much more injurious effect than mild laxatives. If resort be had to the use of medicines which have been recommended to stimulate nerve-action, not much benefit will be obtained.

**Action of Water.**—What should be present in the intestine is a small increase of lubricating substances, as it were, and to that end altogether the best results have been obtained by causing the patient to take a great deal more water than is his usual custom. Let him take, upon rising in the morning, two tumblerfuls of water. As a rule, those who drink considerable water are not troubled with constipation. The laxative action of the water can be insured by the addition of some mild saline, like the bicarbonate of sodium, or even common salt, and the reason why such an effect is produced is that the mixture formed by the union of some saline with water does not readily pass through the mucous membrane, and so into the general system.

**Action of Salines.**—The theory now generally accepted with regard to the *action of salines* is that they are not absorbed and that they prevent the water with which they are combined from being absorbed; hence the water, by exciting the peristaltic action of the bowel, brings about a movement to discharge it, and with that the other contents of the intestinal tube. There is considerable to lend support to this view. It is not necessary to give large doses of saline cathartics, as a half a dram of the sulphate of magnesium dissolved in a pint of water commonly operates very nicely. The best

form of such a laxative is an effervescent magnesium sulphate slightly sweetened. A very small dose of quinine or arsenic, taken with the saline laxative in the morning, rarely fails to produce all the laxative effect required in every form of deficient secretion from the bowels; for instance, in the constipation following fever, when it is desired to obtain a free alvine evacuation. It is well to tell the patients that they will not, perhaps, see much effect for several days; but if they can be induced to persist in the daily use of large quantities of water, a great deal of benefit will most certainly follow.

**Fruit in Constipation.**—There is a supposition on the part of the laity that certain fruits are laxatives, and that is probably true to a limited extent. Oranges may be eaten with benefit, but it usually requires ten or twelve to overcome an obstinate constipation, a fact which renders the remedy inapplicable in this climate. In the warmer climates, however, the worst forms of constipation which appear can be overcome by oranges alone; and the more juicy they are the better, from the fact that the citric acid which they contain has a tendency to produce a catarrh of the intestines, if taken in excess. Figs are a rather dangerous laxative, for they may obstruct the intestines; there is not much danger, however, in this direction, if they are taken with a large quantity of water. It will be found necessary to use about double the amount of water with figs that will be required with any other laxative fruit. The fruits of this climate are very uncertain in their action. The action of apples is very good, but very many persons are unable to eat them in sufficient quantity to produce any effect upon the bowels, although they may at the same time take a large quantity of water. All along it will be found that water is one of the most important agents to be employed in overcoming deficient secretion in the intestine.

**Flatulent Constipation.**—If flatulence resulting from decomposition of the intestinal secretions accompanies the constipation, recourse may be had through the intestinal

antiseptic tablets, composed of the sulpho-carbolates of lime, soda and zinc, and to this may be added strychnine if there is evidence of deficient innervation in the intestines, or what perhaps is better still, the anticonstipation pills, two or three of which may be taken after each meal.

**Deficient Innervation.**—How are we to judge that the leading element in the case is deficient innervation, especially with reference to the small intestine? As a rule, deficient innervation is an accompaniment of the constipation that troubles persons with sedentary habits of life. Ordinarily it attends the constipation present in elderly persons, and such constipation also occurs among those whose occupation causes them to maintain positions in which the abdominal muscles are to a very great extent motionless, such as shoemakers, tailors, etc. There is also a tendency to headache, and there is a great deficiency in the excretion of the coloring matter of the bile, as might be expected, for the secretory action of the intestines is as much interfered with as is the muscular action. Hence this class of patients are usually of a dull, shallow color; there is a tendency to greasy accumulations upon the surface; the entire movements are sluggish, and there is usually reduced frequency in the pulse.

**The Treatment.**—Now, with regard to the treatment for this class of cases. In the first place, the habits of the patient have a tendency to keep up the constipation, but the means to be employed for overcoming it are different from those resorted to in the other class. As a rule these patients do not require much water, because it weakens their digestive powers, and they will very soon complain of loss of appetite, heaviness in the head, etc., and it does not excite much peristaltic action of the bowels. At all events, it is not nearly so likely to increase the peristaltic action as in the class of cases in which the deficiency of secretion in the intestinal canal is the leading element. What should be done here is to arouse the peristaltic action of the bowels and at the same time increase the general innervation of the secretory apparatus.

To do this, the best means that can be employed, if the patient is permitted to remain at his occupation, is water applied externally, with some tonic to the intestinal canal given internally, and nothing is better than the anticonstipation granules. The only way in which they can derive benefit from the internal use of water is to send them away from their business to a mineral spring, then having a change of occupation, the water taken internally will give them much benefit. But most patients will be unable to make this change, and for these water may be used externally with great advantage. The patient should be directed to take a sitz-bath every night, in water as cold as the patient can bear it and have a good reaction afterwards. In a great many cases this simple measure will work wonders, just as it will do in cases of deficient innervation of the large intestine.

Another method of using water externally, is, on rising in the morning to sponge the spine and abdomen with cold salt water, made about as irritant as possible. In other cases, great benefit will be derived by giving the abdomen a local shower-bath, and that can be done by dashing the water against the abdomen, while the patient is in the standing position. This brings about an action in the bowels, the same as a cold hand upon the abdomen causes contraction of the uterus; that is, it is through the sympathy of the nerves of the surface with the visera underlying them.

In this class of cases strychnine has proved itself a very efficient remedy and it may be administered in combination with any other drug. It will increase the efficacy of small doses of the resinous cathartics, which are irritant and stimulant; hence small doses of aloin with strychnine and atropine as we find it in well-known anticonstipation granules, may be given with much more benefit than when it is administered separately.

The application of the faradic current, one pole of the battery placed over the spine and the other passed up and down over the abdominal walls, will, in many cases, be found beneficial.

What is known as the health-lift will prove advantageous in certain cases, and the reason is that it brings into action all the abdominal muscles, especially the recti, and that action is brought to act directly upon the sluggish intestines. When any lesion of the bowel is present, the health-lift cannot be employed.

In the constipation dependent upon diabetes, due to total deficiency of secretion into the intestinal tube, death may result as the consequence of this condition which occurs in connection with this disease.

When giving the anticonstipation granules, they should be given in doses sufficient to cause one evacuation daily and no more. As the habit becomes established the dose may be lessened, until it can be finally stopped altogether. Experience shows that the best results are obtained by dividing the daily dose into three, and by this means a tonic instead of a stimulant effect is produced. Begin with six granules before each meal. If this is not enough, give nine or twelve. Just as soon as the least overaction is produced, lessen the dose to four, three, two or one, as each case demands; the rule being to lessen the dose if the second evacuation occurs in one day.

When the dose has been stationary for one week, with no overaction, lessen the dose again; and so every week, cutting the granules in two, four or eight if necessary. When they can no longer be reduced, drop the mid-day dose; a week later drop the evening dose, but continue the morning dose for a week longer to clinch the cure. It is seldom necessary to reduce more than to the one granule, but if it is, they can be easily cut with a penknife.

Sometimes the atropine causes dilation of the pupils, etc., to an unpleasant degree, and it is then advisable to add one or two granules of physostigmine, gr. 1-250, to each dose. Emetine, gr. 1-67, or lobelin, gr. 1-67, may be added for costiveness; podophyllin, gr. 1-12, to act on the liver; euonymin, gr. 1-6, for the upper bowel; or elaterin, gr. 1-20, when there is obstinate constipation at first. For it must not be forgotten that these laxative granules are not intended for cathartics,

but to cure habitual constipation; hence a brisk cathartic may be needed at first to clear away accumulations.

### MECHANOTHERAPY

Nature has assigned to every organ and structure in the body a certain purpose of existence or reason for being. This purpose is the part which the organ or structure plays in the sum-total of activities which constitute the life of the body. The share of the organ or structure in the totality of life-manifestation is expressed in its *function*. The connection between the function of an individual organ or structure and the physiological capacity of the whole organism is a twofold one, to-wit, the *sympathetic* control through the nervous system, and the *nutritional* influence through the circulation of the blood. These two means of connection are again intimately related to and dependent upon each other because nutrition through the blood-circulation is controlled by the so-called vasomotor nerves, which belong to the sympathetic nervous system, and the action of all nerve-tissue is dependent on the nutrition of such tissue through the quantity and quality of the blood-current.

**The Nature of Function.**—Function is exercise of physiological power. The performance of function involves a production of animal heat. This again is dependent upon burning-up, or oxidation, in the functioning organ. Augmented oxidation is equivalent to increased consumption of tissue-elements and calls for a compensatory supply of nutritive material to make up for the loss. Coincidentally there is a greater deposit of waste (slack, ashes) in the active part.

What is the practical meaning of these theoretical considerations? If we wish to enhance the functional power of any part, we must be able to increase its blood-supply. If we desire to stimulate the circulation in or nutrition of a part, we must be able to augment its functional capacity. By increasing the circulation in and capacity of a structure, we intensify its metabolism. Oxidation becomes more intense, regeneration of tissues and fluids more rapid. As

a necessary result the lymphatics and absorbents do more work and elimination of waste is more active and copious.

With these physiological considerations firmly fixed in our minds, we are prepared to understand the *rationale* of the several therapeutic methods ordinarily included under the head of *mechanotherapy*. There are seven or perhaps eight of these mechanical methods which typify the physiological conditions and processes above referred to. It will serve our purpose best if we consider them under their proper heads, beginning with the more elementary varieties and concluding with those which require a more or less elaborate equipment and a corresponding amount of skill and experience in the use of the latter.

A mechanotherapeutic method is *manual* if it involves the use of the hand in its application, or *instrumental* if one or more mechanical devices, apparatus or machines are employed.

#### *Swedish Movements*

The ordinary exercise of the body in walking, riding, swimming and in the practice of various athletic sports is a hygienic rather than a therapeutic measure. It is necessary for the preservation of health. When we systematize exercise, however, and apply it to the whole body or to any special part according to a well-regulated plan for a well-defined purpose, it becomes a therapeutic method and serves the purpose of restoring rather than preserving health.

Viewed from the standpoint of therapy, this special form of exercise is called *kinesiotherapy* (movement cure, Swedish movements). The term "Swedish movements" suggests the country where kinesiotherapy has been most assiduously cultivated, and the people who have ever been its staunch supporters.

A *Swedish movement* is any form of exercise with a fixed duration, direction and purpose. The duration of the exercise is suggested by the tolerance of the part which is involved in the "movement," by the endurance of the patient and by the character

of the effect aimed at. The *direction* of the movement is suggested by the anatomical parts which are to share in the effects produced. The *purpose* is contained in the diagnosis of the case and should be clear in the operator's mind before any manipulations or movements are begun.

There are two general varieties of Swedish movements:

**Active Movements**, or movements which are performed by the patient by his own will and effort without help or interference. If the patient is told, for instance, to bend the arm and in this way contract his biceps muscle, this movement, if properly performed by the patient, according to the operator's instruction, would be an active movement. A movement of this kind might be applied to one or to any number of the voluntary muscles of the body for the production of some well-defined effect.

**Passive Movements** may involve one, two or more of the muscles of the body without the cooperation of the patient's will or effort. If the operator, for instance, takes hold of the patient's arm and bends it, the patient neither aiding nor resisting, the movement would be a passive one. Movements of this kind are applicable to muscles of any part of the body.

The character both of an active and a passive movement may be changed by the kind (and amount) of labor involved in performing it. If the operator grasps the patient's arm and bends it, the patient remaining entirely passive in the performance of the movement, the effort of bending the patient's arm will be comparatively slight and easy. If, however, the patient is told to resist by bringing the muscles of his arm into play, extending the arm while the operator tries to bend it, it is plain that the effort of bending will be more difficult, the amount of labor involved being in proportion to the amount of resistance offered by the patient.

**Classification.**—This principle of resistance enables us to classify the various active and passive movements as:

*Concentric movements*, if the patient, in moving certain muscles, resists the efforts



of the operator to *prevent* these movements, or

*Eccentric (eccentric) movements*, if the patient resists the efforts of the operator to *perform* certain movements.

In keeping with the character of the movement we may speak of *flexion, extension or rotation* according as we bend, straighten or turn a certain part.

**Physiological Effects.**—What is the effect of exaggerated exercise of this kind? The performance of the movement involves labor, labor causes a greater consumption of food-elements in the part concerned, metabolism becomes more rapid and intense, there is a greater production of body-heat in the active region and a greater formation of waste. Exaggerated exercise, therefore, means an exaggeration of all the physiological potencies included in the concept of function. Accordingly, there must be increased and improved nutrition. The structure will eventually improve in its quantity and qualitative tone. There will be what is known as physiological hypertrophy, and, in keeping therewith, greater functional power. The part will hold more blood, the blood will circulate with more vigor, sluggishness of the blood-supply (venous congestion and the local autotoxic condition produced thereby) will be counteracted. The functional power of the part is increased. The part becomes stronger, larger, more active and therefore healthier.

It would take us beyond the scope and power of our lesson to illustrate these physiological considerations in their relation to all the clinical problems in the solution of which the application and performance of Swedish movements would be of practical value. A few illustrations, however, would serve to make the subject-matter clearer and show its intensely practical import.

**Abdominal Congestion**, more especially stagnation in the portal circulatory system, is one of the most common and most fruitful causes of disease. The number of conditions that are directly traceable to passive hyperemia in the epigastric and right hypochondriac regions is legion. The symptoms of these variable conditions are due

to one of two distinct pathologic states, not infrequently, however, to both. One of these etiologic factors is *pressure* of the practically stagnant venous blood-mass, the other is *suboxidation* and its sequelæ.

Increased venous pressure necessitates a corresponding diminution of arterial pressure. As a result, nutrition is depressed. The tissue-elements, particularly the physiological cell-elements of the liver-structure, the glandular elements of the stomach and the muscular fibres of the stomach-wall degenerate, lose their tone and functional quality. In the liver such a condition would cause stagnation and retention of bile and final reabsorption of the bile-elements into the general blood-circulation, poisoning of nerve-centers and production of an endless variety of symptoms, especially of the subjective variety, such as melancholia.

The ancients, in spite of their primitive notions on pathogenesis, knew well that a state of mental depression was usually due to a physical cause and called the condition *melancholia* (*melas*, black; *chole*, bile), or poisoning by stale bile. The latter condition is the direct result of suboxidation in the portal system, the products of katabolism in the liver and in the contiguous territory being carried into the general circulation instead of being gotten rid of through the natural channels of elimination.

A tributary etiologic factor is the direct pressure on the numerous ramifications of nerve-tissue situated posteriorly to the stomach and being originially and principally derived from the two splanchnic nerves that—to all intents and purposes—control the so-called vegetative functions of the body. They form that delicately constructed framework of nerve-paths known as the solar plexus. *Pressure on this plexus causes general depression of energy.* A dilated stomach, a torpid liver, sedentary habits and a vicious position of the body (such as the bending forward of the chest and co-incident compression of the stomach and liver in persons who work at the desk), constipation and the legion of correlated conditions complete the most common

clinical picture of modern medical practice.

**Effect and Technic of Swedish Movements in Abdominal Congestion.**—In these conditions the Swedish movements will work wonders, especially if reinforced by other mechanotherapeutic methods to be considered hereafter. Let a patient lie flat on his back with his feet close together and his arms placed close to his body. Tell him to raise the upper parts of his body slowly and gradually to a sitting position and return again to the decubitant position. What takes place while he performs these movements? There is a tremendous effort on the part of the extensor muscles of the legs, the anterior abdominal muscles and the muscles of the anterior chest-wall. In keeping with the additional work of these muscles the latter become hyperemic and a powerful impetus is communicated to their arterial blood-supply. The abdominal muscles become hard as stone and exercise powerful pressure on the underlying abdominal contents.

The operator may exaggerate this form of kinetic treatment. Let him grasp the patient's leg and bend the knee, the patient lying flat on his back. The flexed limb is moved toward the patient's abdomen, slowly and firmly, until a point of extreme flexion of the hip is reached. Thus far the operator has administered a passive movement. When extreme flexion has been accomplished and the limb of the patient is held by the operator in this position, let the patient try to extend slowly and firmly his leg against the resistance offered by the operator. The patient is performing a concentric movement, because, in moving his muscles, he is resisting the operator's efforts to prevent the performance of these movements.

A variation of this method would be the following execution of a concentric movement: Let the patient lie flat on his back. Let him try to raise his leg without bending his knees. This would be an active movement. If the operator places his hands on the patient's legs and resists the patient's attempts to elevate his limbs, the movement would be concentric, and, of course, much

more severe. These movements can be varied in many ways. Let the patient stand erect and gradually bend forward without bending his knees. Let the patient grasp a horizontal bar and gradually pull himself up. In all these movements the abdominal muscles would be very active. The intraabdominal circulation would be stimulated, venous congestion counteracted, metabolism intensified and corrected.

There is no limit to the varieties of Swedish movements to suit the indications of an endless number of clinical conditions. The movements may involve the whole body, a portion of the body or even a small part, as one finger. We may extend, flex or rotate with or without resistance one finger, the hand, the arm, the shoulder, one toe, the foot, the leg, the hip, and divide these movements into any number of subvarieties, as our fancy or purpose may dictate. We may treat the head, the neck, the chest, the back. To force and improve the respiratory movements the operator may, by means of his flat hand, compress one part of the chest-wall, and in this way cause deeper and fuller respiratory movements in the remaining parts. The subject can be elaborated without limitation by the ingenuity and resourcefulness of the operator. The effects produced should be anticipated by the physiological knowledge, diagnostic judgment and individualizing power of the physician, and should be closely adapted to the clinical subject under consideration. The full import of kinesitherapy becomes apparent if combined with other mechanotherapeutic means, especially massage. The latter will be the subject of our next lesson.

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#### POSTGRADUATE COURSES

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You ask some comments on the course. I have tried to think of something critical but have failed. One thing that makes me particularly interested in the CLINICAL MEDICINE Postgraduate Course is the fact that I have a very intimate friend now taking the M. R. C. S., L. R. C. P. postgraduate course in London, England. In a letter received from him a few days ago I find the follow-

ing: "They teach here that in such a case as when a young married woman, age 35, comes complaining of chronic pelvic pain after labor, examination showing slight prolapse of the uterus, she is suffering from neurasthenia, and an operation is not necessarily indicated." I replied that he could do as well by giving Buckley's uterine tonic and glycesto-magnesium suppositories without going to England to learn it.

Again, in the field of medicine proper he remarks: "In nervous diseases we have Dr. H., and he certainly is fine. Last Thursday for example he presented the following interesting (note!) cases:

"1. Traumatic ulnar paralysis.

"2. Peripheral neuritis.

"3. Rheumatoid arthritis with such marked muscular wasting as to simulate muscular atrophy.

"4. Progressive muscular atrophy.

"5. Syringomelia.

"6. Amyotrophic lateral sclerosis, with bulbar paralysis.

"The first two of these are comparatively simple cases, easily diagnosed and treated. (He mentions no treatment.) The four latter are 'incurable' according to Osler and other 'authorities.' I have treated successfully the first two, not one of the latter four have I encountered in actual practice. If I did I should have recognized them."

My reply to him was that while he might be able to recognize obscure nervous lesions sooner than I, yet I would bet a dollar to a doughnut that I could treat a case of scarlet-fever every bit as well as he, could diagnose typhoid as readily as he, could remove an adherent placenta as dexterously. My opinion is that a carpenter can build a barn as well as a graduate architect (and maybe better), and "building barns" is our specialty as general practitioners.

The ordinary postgraduate course, so far as I can see, lacks system. Cases are viewed more as pathologic specimens than as human beings to be relieved of suffering. One man who obtained the M. R. S. S. said that he employed a "coach" daily in his room for three months, passed the examination, and did clinical work later. I knew of a man

who attributed his failure on the L. R. C. P. & S. (Edin.) examination to the fact that he could not state positively whether the artery of the corpus cavernosum ran above or below the center of that structure.

If a man intends specializing, such a course is to be commended, but for me—no, thanks! I'm satisfied with the CLINICAL MEDICINE Course.

R. W. HALLADAY.

Hurry, Alba., Can.

### THE ADVANTAGES OF THE USE OF ACTIVE PRINCIPLES

1. In giving an accurate-measure dose of morphine, pilocarpine, hyoscyamine, etc., we know we are giving just so much, no more and no less; in the galenicals, the active principle may be present in several times the percentage which it is supposed to exist, or it may be entirely absent.

2. Many drugs contain several active principles, coexisting in the crude drug in varying percentage; this will consequently be true of the galenical preparation of these drugs. When two or more active principles coexist different samples of the drug are very apt to differ in physiological action, and may be diametrically opposed to each other in this latter respect. On the other hand, if these several active principles are given separately, or combined as indicated, these objections are overcome.

3. While giving the active principles in minimum doses, frequently repeated *ad effectum*, just the effect desired can be obtained, where with the galenicals it is possible to give an overdose at the first dose, or if the active principles are entirely absent, as is sometimes the case in galenicals, the desired effect would never be obtained, no matter how often the dose were repeated. But you would be very likely to get an undesirable effect from some of the nauseous, noxious substances existing in the galenical preparation.

4. The active principles being free from all inert and antagonistic material, are much more rapid and certain in their effects.

5. Owing to the concentration of the active principles as to bulk, they are very

portable and permit the physician to carry a complete and varied assortment of therapeutic tools with him.

6. The active principles are in a very convenient form for dispensing.

7. They are very reasonable in price, thus helping both doctor and patient.

W. C. WOLVERTON.

Linton, N. D.

[This is an excellent epitome of the advantages of alkaloidal medication. It is "lifted" from one of the examination papers. Now, by the way, we want to ask our students to fire in their questions for our "Question Box." Let them come at once.—ED.]

#### HYDROTHERAPY IN TYPHOID FEVER FOR THE GENERAL COUNTRY PRACTICIAN

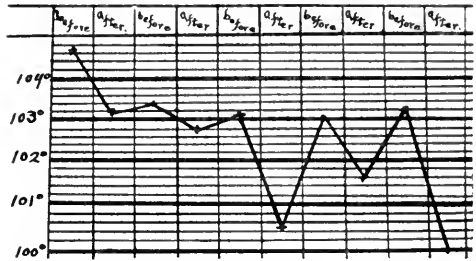
While all will be ready, I think, to admit that the typical Brand bath is the ideal method of applying water in typhoid fever, I am sure that all will also be equally ready to admit that, as a general rule, it is inapplicable in a general country practice; in the first place because the relatives of the patient will object most strenuously, and in the second place because the trained help which is essential to the success of this method is unobtainable in most cases.

I want to outline here a method which I have carried out a number of times and which can be practised in any farm-houses and, with modifications, in any private residence.

I spread two horse-blankets, doubled, or any other suitable padding, on the floor, and cover this with a large piece of oilcloth. Over the oilcloth I spread a sheet wrung out of cold water. I now uncover the patient and lift him onto the sheet, in which I promptly wrap him, administering vigorous massage through it. During the process some member of the family occasionally sprinkles a little cold water upon the sheet from a sprinkling can, and, if sufficient help is available, I have someone help me with the friction in order that it may be more extensive and thorough. I continue this process

for from ten to fifteen minutes, as the case may require.

While thus engaged, someone is arranging the bed and putting hot bottles at the foot and sides. When the pack is finished, I put the patient into the bed, wrapping him in a flannel blanket (no night-gown), arrange the hot bottles around him and give him a drink of hot peptonized milk. He promptly falls asleep.



Temperature-curve under wet-sheet treatment

This process is repeated every three hours as long as the temperature rises to 103°F.

I append a chart which will show the reduction in temperature following the packs in one of my cases.

GEORGE B. LAKE.

Wolcottville, Ind.

#### COMMENTS ON THE LESSON

We have not received as many queries for our Question Box as we had hoped to have by this time. We give a few elsewhere and again invite you all to participate in this department—not only by questions but by comments on the lesson itself and on the work of others. We wish to make an essential feature of this course the reciprocity, the giving and taking of experiences, the mutual helpfulness, that has characterized the whole journal from its inception.

**Significance of Facial Signs.**—The six things which may be learned from a study of the face are epitomized by Dr. H. K. Shoemaker, Flat Rock, Ohio, as follows: (1) Condition of brain; (2) condition of sympathetic and spinal nervous system; (3) the presence of certain local diseases; (4) the presence or absence of pain; (5) the condi-

tion of the arterial and venous circulation; (6) the vitality of the patient.

"To these with propriety may be added the 'psychological' data to be learned from the face, i. e., fear, lack of confidence, deception, temperament, etc."

### **Facial Signs of Cerebral Excitation, Inflammation, Apoplectic Condition.—**

The same gentleman gives these as follows: "Facial signs of cerebral excitation: (1) Contracted pupils, eyes bright; (2) flushed cheeks; (3) throbbing of temporal arteries; (4) facial muscles tense, sometimes twitching.

"In acute inflammation the above signs are intensified, and expression of face, by reason of contraction of muscles about eyes and forehead, is more intense, and yet there usually is no response to an ordinary intellectual stimulus.

"Facial signs of apoplectic condition: Eyes dull, expressionless, prominent, bulging; skin puffy; veins dilated."

**Other Facial Signs.**—These are well given as follows:

"Facial signs of pulmonary disease: Circumscribed redness of one or both cheeks; bright eyes and hurriedly expanding nostrils; sharpness of nostrils.

"Facial signs of abdominal disease: Chronic parenchymatous nephritis; puffy face with pallor.

"Intestinal parasites: White lines about mouth.

"Acute peritonitis: Upper lip raised so as to expose teeth (not constant).

"Cholera morbus, cholera infantum; stage of collapse: Face contracted, hollow cheeks, eyes expressionless, sunken, skin lined.

"Intestinal toxemia: Angles of mouth drawn down, incurving of lower lip; expression of weariness or depression; complexion usually dull, sallow.

"Carcinoma: Straw-colored complexion. Rapid emaciation in patient over forty years is always significant.

"Facial signs of disease of female reproductive organs: Contraction of orbicularis oris."

All these facial signs are significant, but not necessarily diagnostic, and they should serve as "pointers" to be studied in associa-

tion with other signs and symptoms. Of course there are many other facial signs which deserve study. Who will volunteer to write a brief article, one more comprehensive, on this subject? Also something on posture as a sign of disease?

**What the Tongue Shows.**—Dr. Wm. V. Secker, Evanston, Ill., gives the following answer to this question: "The full, broad, thick tongue is usually an evidence of atony of the digestive tract, especially of the mucous membrane. Give the compound cathartic pill, cascara, calomel and podophyllin granules, and effervescent magnesium sulphate. Emetine, one granule four times daily, acts admirably in these cases.

"The pinched, shrunken tongue indicates a want of functional activity in the digestive apparatus. Give quassin and papain before meals and cascara cathartic and saline laxative in the morning.

"The fissured tongue points to chronic diseases, possibly the kidney and inflammatory. Hot dressings to the lumbar region to decongest. Salithia or sodium benzoate.

"A flabby swollen tongue, covered with a uniform yellow, pasty fur, is indicative of catarrhal gastritis or gastroduodenitis of some standing. Wash out the stomach with sodium chloride and bicarbonate each evening for a week. Give copper arsenite, ten granules before meals.

"A narrow tongue with a deep median fissure, on each side of which is a thick, rough fur, the tip and edges of the tongue being red and denuded, is the typhoid tongue. Clean out bowels with calomel and podophyllin, the saline laxative, then sulphocarbolate of sodium, 5 grains every two hours. Give hydrochloric acid, ten drops three times a day, colonic flushings and aconitine for fever.

While this only covers a "corner" of the subject it is very suggestive and we hope will lead others to take up the subject. Who will volunteer for a comprehensive article upon "The Tongue and its Therapeutic Indications." Something splendid might be written on this subject.

**Why Alkaloidal Practice is More Scientific.**—"Science is exact knowledge,

and compared on the basis of exactness the active principles are far and away superior to the galenicals. Take a given quantity of a pure active principle: we know exactly its chemical formula, its action on a normal system, its action on diseased system, and its behavior chemically and therapeutically when continued with other active principles. No matter how labelled or how carefully prepared, each sample of a galenical agent must be 'tried out' and the word 'exact' has no place in description of such process. That is succinct and comprehensive."

**Palatability.**—Dr. E. Burd of Lisbon, Iowa, says: "Palatability is a very important item, especially among children. I do not believe men like nasty-tasting medicines any better than women do, but somehow they are generally left out, and palatability mentioned only as desirable for 'women and children'."

As regards children it might be added that giving disagreeable medicines is often dangerous, since the struggle to administer them often does more harm than good and may even endanger life. If the drug is palatable it is readily taken and there is less antipathy toward drug-therapy, while the influence and popularity of the doctor is increased.

Dr. W. Herrington, Green City, Mo., puts it well, as follows: "Remedies should be palatable, especially with children and women and most men, because we want to produce a certain effect without masking any facial expression. If we give a nasty, nauseous dose the patient will make all manner of facial contortions and possibly leave an expression on the face that will cause us to make a mistake in the physiologic effect. Remedies that are not palatable are liable to cause nausea, and the patient won't take it.

"There are other patients who are not very sick and unless they get a nasty dose the psychological effect is not there. Again it is bad enough to be sick, let alone to be doped with all kind of slops and nasty draughts."

**Alkaloids of Ipecac.**—Dr. R. W. Halladay, Hurry, Alta., Can., gives an excellent resume: "Emetine is a white crystalline alkaloid, odorless, bitter, comparatively in-

soluble in water, forming unstable salts with acids. In health given in doses of 1-60 to 1-30 grain it causes increased production of saliva, and of respiratory and alimentary mucus. The liver is very slightly stimulated to the increased formation of bile.

"Given in doses of 1-8 to 1-4 grain vomiting is produced, both from its local irritant action upon the gastric mucosa and from its action upon the vomiting center. (This is proved by its acting as an emetic when injected subcutaneously.) More or less nausea, muscular relaxation, free perspiration and a degree of exhaustion necessarily accompany emesis.

"Given in doses of 1-2 to 1 grain dry, a mild cathartic action is brought about. The stools are rather greenish in color. The flow of bile is greatly augmented. Usually one or two green stools are all that result.

"Emetine is used: (1) In respiratory diseases, particularly to liquefy tough sputum in laryngitis and bronchitis, including capillary. (2) In chronic gastric catarrh of alcoholics, in the summer diarrheas and mucous diarrheas of children, emetine (1-67 grain) will modify intestinal secretion. (3) In the dysentery of adults, emetine, gr. 1, will cleanse the bowel through its cathartic action, will greatly augment the secretion of bile, and will alter the character of the intestinal secretions. It is a 'specific' in this disease. (4) Emetine in doses of gr. 1-6 every half hour till nausea is produced is a good remedy for internal hemorrhages."

As pointed out by Dr. W. C. Wolverton, Lanton, N. D., *cephaeline*, the other alkaloid of ipecac, is an exceedingly active emetic, much more so than emetine, which, when pure is only slightly so. The trouble is, that much of the emetine on the market is impure, contaminated with cephaeline.

**Application of Heat.**—Dr. W. C. Wolverton, Linton, N. D., covers this ground nicely:

"The *Primary Effect of Non-Reactive Applications of Heat* in any form is one of relaxation of the skin and of its component parts, including the blood-vessels, which lose their tonus and collapse. These relaxed blood-vessels will accommodate more blood than in

their naturally firm and elastic condition, and become engorged with blood, without proportional rise in blood-pressure. When the tonus of the blood-vessel is exhausted, and the circular muscles of the arterial coat are completely relaxed, the intravascular blood-pressure becomes less, and heart-action becomes easier, because the volume of blood in active circulation in the interior of the body is diminished. This differs from the *Secondary Effect of Reactive Applications of Cold* in that with the latter, diminution of blood-pressure follows a *centripetal* increase of blood-pressure, which taxes all the vessels from the periphery to the heart, and includes the latter organ in this increasing pressure; while with *nonreactive applications of heat*, the diminution of blood-pressure is *centrifugal* and occurs *primarily*.

The *Continuous Application*, then, is to be preferred where the resisting capacity of the heart-muscle and vessel-walls is doubtful, owing to organic disease of the heart or degenerative changes in the walls of the arteries; or in cases where there is a tendency toward internal congestions, as in all organic diseases of the kidneys.

"The *Effects of the Continuous Applications of Heat* are: (1) Metabolism is made more active, and the heat-output is increased; (2) diaphoresis takes place; (3) the germicidal power of the tissues becomes greater, owing to the increased amount of oxygen brought to the tissues by the increased volume of blood.

**Results Following Non-Reactive Applications of Cold.**—"The skin, with all its component parts, is made to contract; because of the contraction of the blood-vessels, the blood-mass in the skin is lessened. Under these conditions the nutrition of the skin is poor, and its functions hindered accordingly; the respiratory function and diaphoretic action of the skin are depressed, the result being retention of waste-products, a condition favorable to autointoxication in its various forms, and the formation of excellent culture-media for pathogenic germs. The tendency, under these conditions, is in the direction of retrograde changes, and finally, death of tissue.

"The *cold bath is not a rational treatment of heatstroke*, because it encourages the increase in formation and dissemination of toxins, and hinders their elimination; the pores of the skin are closed, no heat radiates, and toxin-formation in the heated interior is increased."

Another says: "The application of external heat relaxes the surface, blood-vessels and skin and permits the blood from the hyperpyrexial internal organs to flow passively to the surface and through perspiration thus induced to radiate the excessive heat.

"According to Abbott and Waugh the physical treatment is by cold applications (ice) until temperature falls to 105°F. Sedatives such as aconitine or veratrine as indicated, and if perspiration cannot otherwise be produced pilocarpine should be used hypodermically. Elimination will be aided also by veratrine, etc."

Dr. Juettner's theory concerning the use of heat instead of cold in treating sunstroke, while at variance with that of most clinicians, seems reasonable. What say our readers? This is the time to open this up for discussion. Let us have a large number of short articles on this subject for next month.

**The Eyes and Disease.**—An excellent outline of relation of the eyes to the diagnosis of disease and the remedial indications is given by Dr. R. W. Halladay, Hurry, Alta., Canada:

"The eyes are of interest in relation to various diseases, particularly those of the nervous system.

"1. Eyes bright, pupils contracted, the neighboring muscles contracted—these point to a brain-condition varying from mere excitation to inflammation.

"2. Eyes dull, expressionless, pupils dilated and immobile—cerebral congestion, especially if the patient be drowsy.

"3. Eyes full and prominent, puffy face and outstanding veins—apoplexy. Or in this condition we may find the eyes turned towards or from the paralyzed side, the latter if convulsions have occurred.

"4. Strabismus, optic neuritis, irregular pupillary dilation are seen in meningitis.

"5. Nystagmus seen in meningitis and multiple sclerosis or other intracranial disease.

"6. Protrusion of the eyes—extraocular tumor, exophthalmic goiter.

"7. Effusion of blood into lower lid—cranial fracture.

"8. Bluish sclerotics and dilated pupils—danger of pulmonary tuberculosis.

"The eyes are often an index as to:

"1. The beginning toxicity of a drug. E. g., dilation occurring while a patient is taking atropine or hyoscyamine is an indication that he is fully under its remedial influence, and increase of dosage converts the action into a toxic one.

"Somewhat similar is the irritation of the lids while arsenic and the iodides are being administered, and the drooping of the upper lids from gelseminine.

"2. The condition of the eyes often gives the knowledge that a certain drug is contra-indicated. For instance, one should hesitate to give gelseminine when the eyes look heavy and the lids droop, nor should he use arsenic boldly in any case where an irritative (active) condition of lids is present.

"3. The condition of the eyes sometimes indicates certain remedies. For instance, no matter what the cause, a patient with bright eyes and contracted pupils will usually be benefited by gelseminine, while atropine will benefit nearly any disease associated with dull and drooping eyes with immobile pupils."

**Treatment of Apoplexy.**—The following is given by Dr. Wm. B. Secker, of Evanston, Ill.: "Indications for treatment in a typical case of apoplexy are: (1) *Rest* by putting patient to bed, with head partly elevated; (2) *relieve* congestion by applying ice to head and heat to feet; do not freeze scalp or burn feet, as patient does not feel. Friction to legs to restore circulation. Brisk catharsis by croton oil, one to three drops on the tongue. [Elatrin may be used if patient can swallow.—ED.] Local bleeding in patients that will stand it. (3) No stimulants to excite circulation unless heart is weak, then strychnine hypodermically. (4) Keep patient warm, thereby keeping blood to surface. Veratrine if fever and pulse are high,

until the latter is reduced to 70 per minute. If delirium, give gelsemine in small doses.

(6) Respiration can be aided by raising the larynx with tips of thumb and index-finger; inhalation of oxygen is of great value. (7) Bladder should be looked after and emptied at regular intervals. (8) Absorption of clot after inflammation subsides by giving the iodides or mercury biniodide, gr. 3-67; arsenic iodide, gr. 1-67; phytolaccin and iodoform, aa. gr. 1-2 given three to five times a day, just avoiding toxic effects. (9) Food should not be given for forty-eight hours, then only two ounces of liquid every two to three hours. (10) The patient should not be allowed to sit up for three weeks, and then only for a few minutes at a time, until the cerebral circulation has adjusted itself to new conditions (11) Galvanism and strychnine to arouse the nerves to action. Also thebaine when strychnine has been pushed to limit: indications of action and dose same as strychnine."

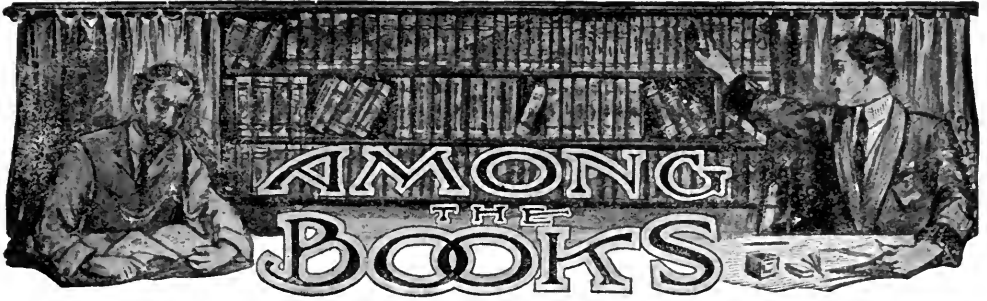
### EXAMINATION QUESTIONS

1. What are the channels of elimination? Name the principal waste-products eliminated through these channels in (a) health, (b) disease.
2. What is meant by egestion? Distinguish between secretion and excretion. What is meant by histolysis? retrograde metamorphosis?
3. Name the various digestive ferments encountered in the digestive tract, and their functions.
4. How is the body-heat produced?
5. Tell what is meant by intestinal autointoxication. Why is the cecum the seat of much putrefactive trouble?
6. What are the products of normal and abnormal gastrointestinal fermentation?
7. What are the causes of constipation? Describe a rational treatment for this condition. How do saline cathartics act?
8. What is meant by mechanotherapy? by Swedish movements?
9. Classify Swedish movements and give their physiological effects.
10. Tell something of the technic of these movements.

### RESEARCH QUESTIONS

1. What bacteria are principally involved in gastrointestinal fermentation? Tell something about the chemistry and properties of indol, phenol and skatol.
2. When was pepsin discovered and by whom? pancreatin? When should the former be used and when the latter?
3. Tell something about the source and effects of the purin bodies.
4. How does atropine act as an anticonstipative?
5. Who introduced Swedish movements?





#### MACMILLAN'S "CHRONIC CONSTIPATION"

Chronic Constipation, and Allied Conditions, Pathology, Etiology, Diagnosis and Treatment. By J. A. MacMillan, B. A., M. D., of Detroit College of Medicine. Kansas City: The Burton Company. 1908. Price \$2.00.

Constipation does not kill, but it tortures. Food, after it has done giving health, leaves a residue that health must get rid of or it will supply an amount of disease. The most successful medicaments are evacuants. The alimentary canal is the kitchen for the palace of the body, and the finest chamber of this palace will give no comfort if the kitchen is not kept clean. Hence Abbott's undeniably basic doctrine of alkaloidal practice: "Clean out! Clean up! then keep clean!" And this book of Dr. MacMillan's will be a great aid in understanding how to put the maxim into practice. The doctor writes plain and elementary enough to recall the elementary truths we have learned long or short ago and that bear on the subject at hand. The most valuable idea of the Doctor's in the book is the importance of peristalsis, the ills arising from its deficiency, and the best way to restore it to the normal. The Doctor is a master of his subject, and it is a pleasure and profit to follow him through the pages of his book.

#### SELTHER'S "INFANT STOOLS"

Infant Stools. An Introduction to the Study of It. By Paul Selter, M. D. Translated by Herbert M. Rich, M. D. Pub-

lished by the Detroit Medical Journal Company, Detroit, Mich. 1907. Price 30 cents.

An extended outline of the subject, very instructive not only for the pediatricist but also for the general practitioner.

#### POTTENGER'S "TUBERCULOSIS"

Diagnosis and Treatment of Tuberculosis. By Francis M. Pottenger, A. M., M. D. New York: Wm. Wood & Company. 1908. Price \$3.50.

In our fight with the great and mysterious enemy of human and bovine life, the "white plague," we have not yet come to a perfect understanding of the enemy's nature nor of the arms best used against him. Theories are needed to explain facts, and facts to prove proposed theories, and the two are more likely to be met with in a thoroughly educated physician who has fortunately the material at his command to learn constantly from and teach the others from facts. These are the happy conditions under which the author, who is the medical director of the Pottenger Sanatorium for diseases of the lungs and throat, located at Monrovia, California, wrote the book before us. It is a fine volume both as to mental and material execution.

#### ABRAMS'S "BLUES"

The Blues. (Splanchnic Neurasthenia.) Causes and Cure. By A. Abrams, A. M., M. D. (Heidelberg), F. R. M. S. Illustrated. Third edition, revised and enlarged. New York: E. B. Treat & Company. 1908. Price \$1.50.

This is the third time since 1904 that we have the pleasure of reviewing and highly recommending this book. While the contention about the portal, respectively the visceral abdominal, circulation is a very old one, dating from the period when even the oft innocent liver used to be inculpated by regular and irregular quacks, it is a profit to have the question so lucidly and yet so scientifically revived as Dr. Abrams does in this book. And neither does he lose himself in theory, but applies well his science to his own practice and then teaches others to imitate him which they will be able to do if they make an earnest study of his book now before us.

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#### NEUSSER'S "BRADYCARDIA AND TACHYCARDIA"

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Bradycardia and Tachycardia. By Prof. Edmund von Neusser, M. D., of the University of Vienna, Austria. Translated by A. MacFarland, M. D., of Albany Medical College. New York: E. B. Treat & Company. 1908. Price \$1.25.

This volume is Part II of the "Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation," by the same original author and translator. Excellent little books these are for study and reference. The present volume has an appendix of special interest, containing articles on Cause of the Heart Beat; Adams-Stokes Symptom Complex; Adam-Stokes Disease; American Medical Literature on Tachycardia, and Foreign Bibliography on these subjects. The style is most readable and the subject-matter very informing in its discussion.

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#### MCCANN'S "CANCER OF THE WOMB"

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Cancer of the Womb. Its Symptoms, Diagnosis, Prognosis and Treatment. By Frederick John McCann, M. D. (Edin.), F. R. C. S. (Eng.), M. B. C. P. (Lond.). London and New York: Henry Frowde, Oxford University Press. Price \$7.00.

This book contains 161 royal-octavo pages of text, and 46 full-plate illustrations of

exquisite workmanship and faithful realism. It is divided into the following chapters: (1) Anatomical introduction. (2) Etiology. (3) Cancer of the neck and body of the womb. (4) Spreading of uterine cancer. (5) Diagnosis. (6) Microscopic appearances and diagnosis. (7) Surgical treatment of uterine cancer. (8) Value of vaginal total extirpation of the cancerous uterus, and the extended abdominal operation. (9) Treatment of inoperable uterine cancer. (10) Sarcoma uteri. (11) Deciduoma malignum. (12) Cases. (13) After-treatment of operations for cancer of the womb.

The author worked for years in gathering pathologic material for this book. He was not satisfied with what the teaching literature existent afforded. Hence it is that which he had seen, looked upon, and treated and followed to a cure or to the end of life, and then studied again as a specimen. It is these that taught him that which he teaches us. In the best sense of the word this book is original, yet is far from exploiting egotism, and the author teaches from the love of teaching.

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#### BREWER'S "TROPICAL HYGIENE"

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Personal Hygiene in Tropical and Semi-tropical Countries. By I. W. Brewer, M. D. Flexible covers, \$1.00. Published by F. A. Davis Company, Philadelphia. An excellent little book in every way.

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#### CORNER AND PINCHES'S "OPERATIONS OF GENERAL PRACTICE"

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The Operations of General Practice. By Edred M. Corner, M. A., M. C., M. B. (Cantab.) etc., and H. Irving Pinches, M. A., M. B., B. C. (Cantab.) etc. London and New York: Henry Frowde, Oxford University Press. 1907. Price \$5.50.

The contents of this book treat most lucidly of matters in surgery, standing between those subjects primarily belonging to a general textbook and those that not very long ago we used to range under the heading of "minor surgery." But our restless age allows no boundaries to stand

such as the latter phrase implies. A modern general practitioner is expected to do often more than mere minor surgery, and as he has to do it, it is best he should know how, and that is what this book very properly undertakes to teach.

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#### RODMAN'S "DISEASES OF THE BREAST"

We have to apologize to the author as well as publishers of Rodman's work on "Diseases of the Breast" for printing the name as Bordman in our May number of *CLINICAL MEDICINE* (page 729)—an error due to copying. Let this occasion serve to call renewed attention to an excellent and most useful book for every practitioner.

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#### GUTHRIE'S "FUNCTIONAL NERVOUS DISORDERS"

Functional Nervous Disorders in Childhood. By Leonard G. Guthrie, M. A., M. D., F. R. C. P. London and New York: Henry Frowde, Oxford University Press. 1907. Price \$3.00.

There is in store, in the book of some 300 pages before us, a truly literary treat and a solid scientific nourishing and upbuilding for the general practitioner and the special pediatricist, for the general neurologist and the special alienist, as well as for the humanistic educator. The author disclaims "all pretensions to scientific treatment of the subject," but all that he is to be allowed of such modest disclaimer is the total absence of scientific pomposity and that alienistic terminology which seems to have been unprovidentially invented for the purpose of concealing thought. And since the "original lectures" forming the basis of this book were not didactic, and so this book itself is not *ex cathedra*, so much the more is it enjoyable because it is *extra cathedric*.

The author has done a decidedly humane service in bringing out this book in which he successfully emphasizes the truism, which will stand some more emphasizing for some time, that "the neurotic child is the father of the neurasthenic adult"—and

good Lord! what an innumerable progeny! Most young graduates are unmarried and know mighty little of adult human and feminine normal or abnormal psychoses, and proportionately *ad infinitum* less of childhood psychoses. To them this book is an obligation to read. The language of this book is easy and void of any "ennuistically" dormific qualities. I wish I could give the reader at least the table of contents of this book. But, dear me, I have yet two shelffuls of books to review.

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#### SCUDDER'S "FRACTURES"

The Treatment of Fractures, with Notes Upon a Few Common Dislocations. By Charles Locke Scudder, M. D., Sixth Edition, thoroughly revised and enlarged, with 856 illustrations. Philadelphia and London: W. B. Saunders Company. 1907. Price, \$5.00.

It is very easy to grow enthusiastic over this modern magnificent work on fractures and dislocations. The book was received from its very first edition on with gratifying approbation by the profession, and this sixth edition has added another proof that the profession was not mistaken. The mechanical execution of the book forces praise for the publishers. That such a text should receive an adequately proper setting is gratifying to an artistic taste. So should it always be!

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#### BARNHILL AND WALES'S "MODERN OTOTOLOGY"

Principles and Practice of Modern Otology. By John F. Barnhill, M. D., and Ernest de Wolfe Wales, B. S., M. D. With 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company. 1907. Price \$5.50.

A very detailed work on 550 pages of 10½ by 6 inches, fully illustrated, and having the following aims to accomplish: (1) To modernize the subject of otology, and especially with reference to suppurative affections of the temporal bone, in which much good work has been done in recent years.

(2) To correct certain traditional beliefs, especially in pediatric practice. (3) To advocate the earliest possible prophylaxis or treatment. (4) To emphasize thorough examination and definite diagnosis as a basis for rational treatment. (5) To present the subject in illustrative form.

The work is prepared by men who have mastered the subject from every point of view and who tried to supply the deficiencies which as teachers of the subject at the Indiana University School of Medicine they found in the textbooks now at command.

#### WRENCH'S "MIDWIFERY"

Rotunda Midwifery for Nurses and Midwives. By G. T. Wrench, M. D., late Assistant Master of Rotunda Hospital. With an introduction by the Master of the Rotunda Hospital. London and New York: Henry Frowde, Oxford University Press. 1908. Price \$2.00.

This book is an English production and publication, and it is arranged in its teaching to satisfy the requirements of knowledge and regulation of certain English State authorities in the prosecution of the profession of obstetric-nursing practice. It is quite elementary and endeavors to avoid the least technical terminology, yet the information imparted is sufficient for any intelligent person to be entrusted with a normal case of parturition. The mastering of this book will legally qualify a person to practise obstetrics.

#### WALLACE AND DUDGEON'S "PROSTATIC ENLARGEMENT"

Prostatic Enlargement. By Cuthbert S. Wallace, M. B., B. S. (Lond.), F. R. C. S., etc. Bacteriology, by Leonard S. Dudgeon, M. R. C. P. (Lond.). London and New York: Henry Frowde, Oxford University Press. 1907. Price \$4.50.

The question of prostatic operations is far from being settled *pro* or *con*, and a monograph on the subject as informing as the one before us is welcome indeed. There are some things old that are worth knowing,

and some things of promise in this book that are new. Every way this monograph is highly recommendable.

The subjects treated of are: (1) Surgical anatomy. (2) Experimental pathology. (3) Morbid anatomy. (4) Morbid histology. (5) Bacteriology. (6) Etiology. (7) Diagnosis. (8) Treatment, general and palliative. (9) Operative treatment. (10) Prostatectomy. (11) Nature of enucleation operation. (12) Carcinoma of the prostate.

The text contains 207 pages and is abundantly and satisfactorily illustrated. There is a good index.

#### BROCKBANK'S "LIFE INSURANCE"

Life Insurance and General Practice. By E. M. Brockbank, M. D., F. R. C. P. London and New York: Henry Frowde, Oxford Medical Publication. 1908. Price \$2.50.

The general practitioner of large practice in a large place will, when he is willing, give a better life-insurance examination than a physician who is devoted exclusively to life-insurance examination. The former case seems to be that of the author of this excellent book, who is connected with the Victoria University of Manchester, England.

#### RIEDEL'S "BERICHTE"

Ausgewahlte Arbeiten aus den Wissenschaftlichen Laboratorien der Chemischen Fabriken von J. D. Riedel, A-Z.

Riedel's "Mentor, 1908." Fuer die Namen, sowie fuer die Zusammensetzung, Eigenschaften und Anwendung neuerer Arzneimittel, Specialitaeten und wichtigerer technischer Produkte. 52 Auflage. J. D. Riedel Aktiengesellschaft. Berlin.

We thank the firm for this very useful catalog of their own productions and those of others of more recent date. We do not know what the price of the "Berichte" is, but we presume that anyone who can make a proper use of it in his medical or pharmaceutical profession may get it for the asking.



### PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## QUERIES

QUERY 5302.—“A Case of Mixed Infection.” E. E. W., Illinois, forwarded a bottle of sputum, asking to have it examined for tubercle bacilli. The doctor writes: “I had it examined once and did not find the tubercle bacilli, but from the symptoms I suspect consumption. Patient is a lady, about 35 years old; has had a cough about four months, expectorating quite profusely, lately mixed with blood. Able to work but very little; no appetite; no murmur in lower portion of left lung. The last few days she has quite a good deal of pain when coughing, more or less, really, over both lungs; but what seems strange to me, she had no elevation of temperature in any part of the day, or night-sweats, or hectic flush of cheeks. Respiration, 29. Hereditary taint.”

The report of our pathologist shows tubercle bacilli to be absent; staphylococci, streptococci, diplococci and pus-cells present. The absence of tubercle bacilli in this specimen, however, does not necessarily mean that the patient is not tubercular; other specimens should be examined at intervals of ten days or two weeks. In the meantime, Doctor, place this patient upon blue mass and soda, 1-2 grain, podophyllotoxin, gr. 1-67, and iridin, gr. 1-6, hourly for four doses every third night for two weeks, with a saline laxative the next morning on rising; calcium sulphide, gr. 1-3, echinacea, gr. 1-2, alternately every two hours during the day; and the arsenates of iron, quinine and strychnine after meals.

Procure from the Geo. E. Leininger Co., of Chicago, one of their pocket mentholated

formalin inhalers (the price is nominal) and let the patient inhale frequently. Keep the nares, fauces and buccal cavity thoroughly cleansed with an alkaline antiseptic. Put the patient upon a nourishing diet, order deep breathing, out-door exercise and salt sponge-baths.

QUERY 5303.—“Vaginal Stenosis.” L. R. D., New York, has a patient well past the menopause who for two or three years has been suffering from a gradual contraction of the vaginal orifice so that the marital obligation has come to be excruciating; even slight stretching by the finger is very painful. “Feels as if it would tear the tissues. No visible changes except an anemic condition of the mucous surfaces. Patient has had three children, most of them of average size. Trouble only for the last two or three years, but is growing worse.”

Possibly a case of kraurosis vulvæ. Little can be done under the circumstances save by surgical procedures, and these are apt to prove disappointing. The affected tissue can be dissected out and plastic work done with satisfactory results in some few cases. Dilation may be attempted under anesthesia. On the other hand you may have an adhesive vaginitis (senile variety). Only a careful examination and description of conditions will enable us to form a positive diagnosis. The adhesions can readily be detected with the finger. The vagina may be douched every twenty-four hours with a gallon of hot normal salt solution and wool tampons saturated with boroglyceride introduced.

Any ulcerated spots should be painted with a solution of nitrate of silver. Personally we prefer to apply wool tampons smeared with cold cream or benzoated oxide of zinc ointment in which a little carbolic acid (3 percent) may be added. A dilator may be introduced for an hour or so daily.

Before we can be of real service to you, however, we must have a clear conception of local conditions and area of involvement. The anemia leads us to suspect senile vaginitis.

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 QUERY 5304.—“Facial Eczema.” G. W. W., Indiana, writes: “I have grown so used to turning to you when “in a hole,” always finding help when I do so, that I present the facts in another case and ask for assistance. For a month now I have been treating a case of facial eczema with various local applications, giving internally weekly or semiweekly rounds of calomel and podophyllin, followed by a daily saline laxative, thus insuring a couple of movements of the bowels daily and, the days of calomel, several movements. I have also given intestinal antiseptics internally three times a day, and calcium sulphide. He is a rather plethoric man and about 60 years old; has been subject to occasional attacks of eczema, but never of the face before. This attack began about four months ago. I have in the time he has been in my care succeeded in “killing” the scaly eruption and his face is now (save at two points just under the outer corner of each eye where small patches are yet to be seen) as smooth as a baby’s, but at times his cheeks are intensely red with an occasional darkening of the red for an hour or two, when he complains of a sticking or stabbing sensation that is very annoying.”

Give this man arsenic sulphide, gr. 1-67, and iridin, gr. 1-6, after meals and one dosimetric-trinity granule (aconitine, digitalin and strychnine arsenate) morning, noon and night, to equalize the circulation; between meals give some good antiscorbutic combination, with a saline laxative every morning. Have the face gently massaged, or better still, if you have one, use the vibrator twice a week. Better examine the urine carefully;

and also be sure that digestion is proceeding normally. If it is not, give enough papayotin to produce “effect.” We think that this treatment will prove effective after two weeks or so, but you must look after the urine, Doctor, and secure elimination of solids. Should medication not prove effective add one ounce of zinc oxide to twelve ounces of liquor antisepticus, U. S. P. Shake thoroughly and dab this on the affected areas. You will get prompt relief and beneficial results of the skin generally. If you do not want to bother with this you will find glycobenphene-Heil an effective application.

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 QUERY 5305.—“Caustics and Epithelioma.”—A Sad Case of Poisoning.” D. M. B., Missouri, says: “On January 27 I made an application of a dermal caustic to a small epithelioma on the cheek of an old lady, with production of a characteristic black eschar, which I informed my patient would drop off in about three weeks. The eschar, or black scab, is still adherent. My patient went to Memphis a month ago, and I am informed is now in a hospital there with erysipelas of the face, starting from the site of application. What are the chemical constituents of the caustic and why does the eschar remain instead of dropping off? Can the application in any way be accountable for the subsequent erysipelas? I have had good results in other cases where I used the remedy.

“On February 20 a 27-months’-old boy got hold of a bottle of the arsenates of iron, quinine and strychnine. It is unknown how many of the little pills he swallowed, as it was not known he had taken any until after his death. He died in twenty minutes after seizure with tetanic spasms. Strychnine poisoning was my diagnosis and search in my office disclosed about forty granules on the floor, the 500-granule bottle nearly empty, cork lightly replaced and bottle in its usual place in cabinet. The child was never known to meddle with medicine, but would always swallow a little pill with pleasure when given to him. He had had abscess of the middle-ear and earache that morning,

and as he was very bright the supposition is he took the medicine of his own accord, as he supposed, to help his earache."

The dermal caustic is a solution of sodium ethylate. A caustic of this type should rarely (if ever) be applied to an epithelioma; we have frequently warned against it. Even the arsenical paste of Marsden frequently sets up erysipelatous conditions, and here the eschar should have been removed by the application of poultices. For your future guidance we repeat our regular instructions for the treatment of epithelioma with Marsden's paste: Take of arsenous acid, one dram; pulv. acacia, one dram; cocaine hydrochloride, two grains. Mix well, add a small quantity of water and rub the paste to a cream. Curet the growth thoroughly and apply the paste on a piece of rubber plaster after the oozing has ceased. Leave *in situ* from eighteen to thirty-six hours. It may be necessary to make another application and to use morphine hypodermically to control the pain. Upon removing the plaster you will find a black mass surrounded by an inflamed area. Apply hot poultices until this slough comes away and then dress as any clean wound should be dressed. Nuclein powder or bovine on iodoform gauze will prove efficacious.

The dermal caustic is intended for blood-filled growths, a little being applied often until the eschar begins to separate at the edges and curl up; this falls in due time, leaving a perfectly normal surface underneath. You cannot possibly have a normal underlying surface when dealing with epithelioma. We should have kept a very careful eye upon the case had we decided that it would be safe to use such a powerful caustic at all.

We note also the death of the child from swallowing an unknown number of the triple arsenates. Strangely enough a similar report reached us March 27. Here a fifteen-months'-old infant got hold of a bottle of triple arsenates and swallowed an unknown quantity and died within thirty minutes with all the symptoms of strychnine poisoning. If a child chewed one of those tablets that would be all he would chew, and as each

granule contains only 1-134 of a grain of strychnine, two, three or even four would not prove fatal. If he swallowed in large quantities, unchewed, it seems that absorption could hardly be rapid enough to cause such immediate death, and yet there can be but little doubt as to the cause here. Did you wash out the stomach promptly and administer antidotes, or were you too late? The writer saved his own child when supposedly moribund after swallowing aconitine, digitalin and strychnine in unknown quantities. This fearful experience serves to impress upon us forcibly the necessity for keeping drugs out of the reach of children, especially drugs of a toxic character.

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QUERY 5306.—"The Therapeutics of Turpentine." A. D., Washington, desires a comprehensive statement of the therapeutics of oil of turpentine. The textbooks on materia medica he finds to be all too brief and narrow in regard to this valuable drug. The doctor suggests that it would be well to call for reports from the field.

Oleum terebinthinæ (oil of turpentine, spirit of turpentine), as found on the open market, is not fit for internal use and, as a matter of fact, should not be used externally if the skin is broken. Oleum terebinthinæ rectificatum (U. S. P.) is the preparation of choice. Merck's is an excellent brand. The average dose is from 5 to 30 minims, but quite large doses may be given in exceptional cases without causing strangury or other untoward effects. The very large dose (half to one ounce) occasionally recommended as a tenifuge is not necessary; sixty drops at most, taken on rising and followed by an ounce of castor oil, being effective. Oil of turpentine is without question one of the best remedies for trichinosis. Five drops should be given every three hours, the patient being nourished temporarily on milk, barley water and thin cereal foods.

Ingested oil of turpentine causes a sense of warmth, or in overdoses or when exhibited to a patient whose gastric mucosa is inflamed, more or less burning; respiration is quickened, the pulse-rate increases in

force as well as frequency, and a sense of nausea may be experienced, which (if a large dose is taken) ends in nausea. Purgings, eructations and partial or total retention of urine for hours, followed by hematuria, usually follow overdoses. An obstinate gastroenteritis has been set up by the crude oil; properly used the rectified oil never causes such disorder. In therapeutic doses the writer notes quickened pulse, heightened temperature, a sense of exhilaration (with perhaps restlessness), and dilation of pupils. Toxic doses later cause insensibility or a muttering stupor, trembling of the limbs, profuse sweating, cyanosis, stertorous breathing, and irregular, thready pulse. All the body-secretions smell of turpentine. It is eliminated chiefly through the kidneys and mucosa. Its external uses and effects are too well known to need description.

Oil of turpentine is indicated chiefly in cases where there is a catarrhal relaxed condition of the mucosa. It is a reliable carminative and promptly relieves flatulence and tympanites. Peculiarly, too, it gives excellent results in many forms of gastric and intestinal inflammation. In typhoid fever, where the tongue is dry, brown and fissured, and the patient is in a semicomatose condition, with tympanitic abdomen, turpentine acts splendidly. It is given 10 to 15 drops every two or three hours, on bread, sugar or in emulsion or milk. Personally I dislike milk. Ellingwood states that a "dry, red, glazed tongue, with suppression of secretion generally and tympanites," indicates this remedy. In cystitis and urethritis small doses act well; use it only in subacute or chronic cases, however. I have given turpentine to children suffering from the vague intestinal troubles of the summer months, with great benefit. This agent inhibits the formation in the stomach of butyric and lactic acids and destroys bacteria, hence promptly affords relief. Give 4 drops on sugar.

In acute and chronic bronchitis characterized by excessive mucous discharges turpentine is an excellent remedy. Small doses frequently and inhalations of steam

bearing turpentine vapor will be used. In twenty-four hours the cough will lessen and discharge be markedly decreased. Capsules may be procured but the drug is best exhibited on sugar. In laryngeal and pharyngeal inflammations the same measures prove effective. Here turpentine stupes may be used, or the linimentum terebinthinæ of the U. S. P. applied on flannel. Such applications are of real value in all inflammations of the lungs or upper respiratory tract, and the old woman who hastens to put on turpentine cloths as soon as cough, hoarseness or "pain in the chest" appear is not doing far from the right thing. In croup turpentine has been used for a century or more. It is applied in the form of stupes or as a liniment (or pure), the fumes are inhaled, and the oil is given on sugar—3 to 5 drops every hour or two, or two doses within the hour, then every hour till relief is obtained. *Calx iodata*, however, has of late superseded this agent as an internal remedy. It may be used as an adjuvant, however, with advantage.

Diphtheritic patients frequently obtain relief from turpentine inhalations: oil of eucalyptus and oil of turpentine may be mixed and used direct on swab or with atomizer. I use the combination and steam inhalations in most cases. Internally, it will be well to give 5 drops every three hours, having the child slowly dissolve in its mouth the lump of sugar bearing the remedy.

The value of oil of turpentine as a hemostatic must not be forgotten. In passive hemorrhages from the stomach or intestines it gives the best results. In hematuria it is liable to prove dangerous, but in certain cases it gives good results. In purpura it rarely fails to affect beneficially the oozing. Its use as a tenifuge has been mentioned. We have better remedies, but pure oil of turpentine—1-2 dram—on an empty stomach in the morning, followed by castor oil, does expel teniæ.

Ellingwood and other authorities recommend turpentine in appendicitis, typhus, peritonitis and erysipelas. The Eclectics use it freely and advantageously in all internal hemorrhages and catarrhs.



The writer looks upon oil of turpentine as one of the most promptly acting and positive stimulants to granulation we possess. Its bactericidal action is remarkable. With cinnamon water and oil of turpentine he has controlled suppurative processes which defied every known agent. Old leg-ulcers heal up under turpentine in every instance. Cleanse the sore with peroxide of hydrogen, curet, if necessary, the edges and base, and then apply pure oil of turpentine on a layer of gauze. Cover with antiseptic gauze or cotton and put on a snug bandage. Repeat daily till the sore is clean and edges close in, then apply defibrinated bullock's blood (borated) and eucrophen or iodoform gauze. If skin-grafting is needed, apply only tiny pieces of skin at intervals of 1-8 inch, cover with rubber tissue perforated with pinholes; over this apply the gauze soaked with prepared blood (sanguiferrin, bovine) and bandage. Do not remove the tissue till grafts have "taken hold," but flood the surface daily with warm boric-acid solution.

Cleanse buccal and nasal ulcers and paint with oil of turpentine: they promptly disappear. Try it in your next cases of chancroid, but be sure to use pure oil. Chilblains are speedily cured by applications of turpentine. Finally, incontinence of urine due to relaxation and dysentery of a mild type in the aged may be treated with this agent. Small doses, four times a day, are best. In acute inflammation of the gastric intestinal or urinary mucosa turpentine should not be used, or at least with great caution.

The idea that "old turpentine" is a remedy for phosphorus poisoning is exploded. At least all the "old" turpentine obtainable now fails to work satisfactorily. Read the very excellent articles upon turpentine in Ellingwood's "Materia Medica and Therapeutics," and Standard Dispensatory.

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 QUERY 5307.—"General Syphilitic Manifestations with Pulmonary Complication." O. H. S., Indiana, writes: "I have a case I wish to relate for your consideration. Male, aged 20; weight, in health, 160 pounds;

was never sick much; parents healthy. A physician of our town was called to see this patient February 22, 1908. Found him feeling bad, little fever, and in about one week diagnosed it as typhoid fever. At this time he had more fever and was delirious for a few days, got out of bed one night; but his fever did not run high until March 7, when it was 105°F. On March 8 I was called in consultation. I found lower lobes of both lungs very much engorged, dulness, and bronchial respirations. The attending doctor had not found this. In the second week of his sickness he broke out with syphilitic eruption; had mucous patches in his mouth. His fever did not continue high, so I did not see him again until March 27. At this time he was hoarse, could only talk in a whisper. There were six or seven ulcers on the left tibia. Pulse weak and rapid, very little fever, some cough. I saw him every day with the attending physician, and he seemed to improve some; still his pulse was quick and he had some cough; ulcers healed. The original doctor was discharged and I took the case April 18.

"I find him emaciated and weak; pulse 100 to 134; evening temperature, 100-103°F.; respiration 24-35; dulness in both lungs, cavity in left apex. Has had coughing spells. At times gets up only a frothy substance, at other times large quantities of mucus and some pus. Has had two coughing paroxysms to which he almost succumbed. When he changes position it brings on a coughing paroxysm, and it is difficult to get him to change often. Bowels regular; appetite extra good; is emaciated. I sent one specimen of sputum to Indianapolis. The laboratory reports: no tubercle bacilli, some pus-cells, some streptococci, and requests another specimen. Respirations are rapid but not distressing (dyspnea). Hoarseness left some time ago, ulcers healed, hair is falling out. Had him on tonics and mercurial treatment. I have never thought this young man had typhoid. Can this be empyema or can it be that the lung-tissue is breaking down from the syphilitic poison? Has never had any pains in either side as a symptom of pleurisy. It is a very

puzzling case to me and I am anxious to have help."

Unquestionably the primary disorder here is syphilitic and we doubt whether any treatment will prove efficacious until the syphilitic virus is neutralized. There is, no doubt, syphilitic laryngitis also, but whether the lung involvement is of a specific character (and such a condition may present—see Anders's "Practice") or an intercurrent bronchopneumonia, it is impossible to decide. Typhoidal and pneumonic infection might be concurrent in a syphilitic subject (as such a patient would yield very readily to invasion) and the sequelae would unquestionably be numerous and hard to control. We do not think that an empyema exists, still it is possible. Only repeated careful examinations of the patient will enable one clearly to understand the pathologic conditions. We should, however, push calx iodata with mercury protoiodide, stillingin, the arsenates and nuclein as alternants to full effect; once a week we should inunct with mercury, and twice weekly rub in thoroughly a dram of unguentum Credé (colloidal silver). Every morning have the entire body sponged with an epsom-salt solution at body-temperature, and wash out the bowel every other day with a colontube and a weak alkaline antiseptic solution. To the mercury add stillingin and arsenates, iridin gr. 1-6, and give after each meal one grain of echinacea. Nuclein may best be given hypodermically, 10 drops morning and night, but if this is not feasible, drop this amount under the tongue and allow it to be absorbed from the buccal mucosa. Report progress.

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 QUERY 5308.—"Arteriosclerosis. Cirrhosis of Liver. Contracted Kidney." C. J. B., Iowa, asks for help in a case described as follows:

"F. P., male, age 72 years, has been sickly for over fifteen years and on this account retired rather early from his occupation as farmer. For the past three to four years he has been confined to his bed, often for months at a time, complaining of pain in abdomen and chest, breathing hard and

labored (asthmatic type), appetite very poor as a rule, gas forming freely after meals, causing distress and eructations. Bowels costive for the past twenty years; has used many kinds of pills and teas to keep them moving.

"Body is very much emaciated, skin of dirty yellowish gray color, dry and loose. Abdomen flat and receding from normal line of curvature. Breathing labored, of the asthmatic type; patient has had attacks of asthma off and on for the past twenty years. When taking deep respirations a hard, labored dry cough results. Patient's teeth are all gone, no stumps left in the mouth. Gums look healthy, soft palate and upper posterior part of pharynx are of a light-yellow color. Eyes show *arcus senilis*. No history of syphilis; genital organs normal and no scars to be seen.

"Palpation: Skin abnormally dry and harsh to touch, marked arteriosclerosis of the radials, temporal and tibial arteries. Abdominal muscles rigid, dry and tender to pressure. Prostatic gland and rectum normal to touch. Am not able to palpate kidneys on account of rigidity of abdominal muscles.

"Percussion: Hyperresonance of chest, slightly on both sides, positive cardiac dullness about 2 by 2½ inches, and apex-beat somewhat removed externally toward axillary line; impact diffuse. Hepatic dullness lessened upward from lower border of ribs for over one inch and tenderness on deep pressure over hepatic area elicited. Stomach somewhat enlarged upward, lateral, left and down; tympanitic on percussion. Intestines, especially transverse and descending colon, tympanitic on percussion.

"Auscultation: Moist râles heard in lungs of both sides. Am unable to elicit any bronchial breathing. Heart, first sound hard and full; mitral sound short, sharp and snappy, showing obstruction to circular flow. Tricuspid valvular sound also short, sharp and snappy. Action of heart is intermittent, generally, and labored. Rumbings of gas quite marked in stomach and intestine.

"Reaction of gastric contents after test-breakfast has given positive results repeatedly

of presence of hydrochloric acid. Urine, quantity often not exceeding 8 ounces in twenty-four hours, is light-yellow, clouded, and contains excessive amounts of phosphates, biurates and oxalates, no sugar, little albumen, has marked acid reaction and a specific gravity of 1024. Desire to micturate is often accompanied by pain in neck of bladder and the voiding of only very little urine. No pus-cells found in urine. Sputum gave negative results regarding tubercle bacilli.

"State of patient, mentally depressed, irritable, distrustful and suspicious. Insomnia marked.

"Best results so far obtained by bromides and tincture of aconite. Patient goes from bad to worse. Diagnosis: chronic nephritis. What are your suggestions?"

The age of this patient is of course against him and there is no question but that you have a marked case of general arterial sclerosis to deal with. The liver is evidently more or less cirrhotic and the terminal stage of contracted kidney probably exists. We should be inclined under the circumstances to give this man cactin and digitalin, gr. 1-67 of each, every three hours, hydrastin, helenin, eupatorin, aa. gr. 1-12, leptandrin gr. 1-6 (the "diuretic and laxative tonic" formula) every four hours, barley water *ad libitum*, and decinormal salt enemata (allowing some of the fluid to be retained) daily or every other day. Have the skin sponged daily with a very weak solution of magnesium sulphate (1 ounce to 2 quarts), followed with brisk friction with a rough towel; order concentrated, easily assimilated food (egg-nog, beef juice, somatose, sanguiferrin, etc.), the prepared predigested cereal foods with enough fruit (well cooked) and pulped meat to afford variety and bulk. Shredded wheat biscuits are good for this man; boiled rice and barley are also suggested. Increase the amount of urine, Doctor, if you have to add barosmin to the cactin and digitalin, and after a while, as conditions improve, give morning and night, on rising and retiring, two dosimetric trinity. We cannot hope to help this man indefinitely, but you can make him more comfortable during

his stay on this earth. The bromides are worse than useless—injurious. We cannot see how aconite alone can fail to prove injurious ultimately.

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QUERY 5309.—"Nevus." W. S. D., Alabama, has a little patient, seven months old, who has a nevus on the forehead about three-fourths of an inch above the left eyebrow. It is nearly three-fourths of an inch in diameter and is one-fourth of an inch thick. It is bright-red in color, having a decided strawberry appearance. The parents are very anxious to have it removed and of course don't want any scar to remain. The doctor asks: "Could I remove it successfully with sodium ethylate?"

A good "dermal caustic" (sodium ethylate) would probably remove this growth perfectly, provided you can keep the child under observation and prevent sudden or rough removal of the eschar. Your case appears to be an arterial nevus, and we should be inclined, under the circumstances, to make a perfect piece of work and excise it under general anesthesia. If the work is done aseptically, an almost unnoticeable linear scar will alone result.

The writer removed a very large nevus of the cavernous type which filled the space under the left eye, adhering to the side of the nose down to the alæ in a child of one year, with the loss of but a teaspoonful of blood and the most perfect cosmetic results. He allowed the deepest part of the wound to granulate up from the bottom. As it was a girl-baby, appearances meant a good deal.

If you try the "dermal caustic," apply a little of it often, protecting the surrounding skin during the application with vaseline. Apply the caustic with a glass rod over the entire surface, and after a minute take up any superfluous fluid from the lower border with a piece of blotting paper. In about three days you may repeat the application. Then allow the eschar which will form to curl up from the edges and remove itself. You may then repeat the caustic. About three such treatments will probably bring you down to normal skin. Nævi of this

kind cannot be cross-hatched, and the injection of astringents is liable to prove disastrous, owing to the formation of thrombi. Were we in your place, we should certainly do a clean excision. By the way, before you operate let us suggest that you address Dr. Wm. Allen Pusey, of Chicago, and ask him to send you a reprint of his article upon the treatment of naevi by freezing with carbon dioxide. Dr. Pusey has had some remarkable results with this agent. Should you use it we shall be very much pleased to have a report from you.

QUERY 5310.—“A Case of Tapeworm.” J. B. S., Washington, in a recent letter says: “A male, twenty years old, has had worms pass from his bowels during natural movements, for the last six or eight months. I gave a ‘worm remover,’ and it did some good, but they soon multiplied again. He complains of a drawing sensation in the rectum all the time and some tenderness also. The worms are about 1 1-4 inches long and 1-8 inch wide, flat, and resemble white wax. They remain alive for some time after they are passed. They also crawl away from him between the bowel actions. Can you name them? The patient is losing flesh. His appetite is good and sometimes it is not, but he becomes hungry soon after eating. A hungry feeling comes over him, but then he can eat only a small amount of food and is quickly satisfied. My diagnosis is, young tapeworm.”

The worms described by you are probably segments of *tænia solium*, an ordinary form of tapeworm. It is quite evident from the number of segments of mature worm which are being voided that a large parasite exists, for, if you will read up on *tænia*, you will find that only the mature segments are voided, each segment being bisexual—male and female. There are no “young tapeworms,” the *tænia* going through an interesting series of developmental cycles. The eggs are scattered when the segments dry and are frequently picked up by animals. There are several varieties of tapeworm, the mature worm always occupying the small intestine. *Tænia saginata*, the beef-

worm, is the most common, being derived from beef. *Tænia solium*, or armed tapeworm, is derived from pork; *tænia cucumerina* is contracted from the dog, and *tænia elliptica* from the cat. Some authorities consider the last two identical. Any good work upon diagnosis will give you all the information you desire relative to tapeworm. If you will use a reliable tapeworm remedy (preferably a combination of male-fern, chloroform and a purgative) you may rest assured of dislodging the worm.

QUERY 5311.—“Traded Uncertainty for Certainty.” Says J. V. W., California: “I am wading into the active-principle methods, and the deeper I wade the better it gets. I have traded off uncertainty for certainty at last. He was a good ‘hoss’ but he will never throw me again!”

We note with pleasure that you are wading deeper into the alkaloidal waters. You will find the swimming good and the water warm, always, and we trust that you will take every opportunity to acquaint your medical brethren with that fact. The whole thing may easily be summed up. The man who knows what he is doing, who can recognize pathological conditions and promptly exhibits the right remedies therefor, giving the small dose at frequent intervals to effect, is the man who gets results. And, Doctor, as you know by this time, the man who gets the results gets the practice.

QUERY 5312.—“Treatment Wanted.” J. A. M., New York, asks: “Will you kindly outline the treatment that you would pursue in a case of tuberculosis of the bone?”

Before we can be really useful we must have a clearer conception of conditions present, part affected, length of time infection has existed and extent of involvement. Also give us a distinct idea of physical conditions generally. Where the bone is necrosed or there is an open lesion or sinus, nothing but operation and thorough removal of the affected parts can avail. Nuclein, the “antituberculosis” formula, echinacea and calx iodata, with plenty of nutritious food, are the main remedies.



BISHAT said over a century ago, "pharmacology in its present state is not a science fit for a methodic mind."—*Sajous*.

DIABETES.—The lack of immunity on the part of the non-exposed suggests a possible infection.—*Eccles, Medical Record*.

SCIATICA.—In *The Medical World*, J. M. Walker tells of curing his own sciatica after many years' suffering, by riding the bicycle.

DR. FRANK BILLINGS wrote in 1903, that drugs, with the exception of quinine in malaria and mercury in syphilis, are valueless as cures.—*Sajous*.

EVOLUTION AND DISEASE.—Nothing in nature is more closely associated with every form of evolution than is disease.—R. G. Eccles, *Medical Record*.

UREMIA.—Sparteine sulphate, gr. 1-2 every three hours, if tension is low, increases the quantity of urine and stimulates heart-action.—Smith, *Medical Era*.

USEFULNESS BASED ON REMEDIES.—No experienced practitioner will deny that nine-tenths of our professional usefulness is based on pharmaceutical remedies.—*Sajous*.

EARACHE IN CHILDREN.—Cannon, in *The Medical World*, commends dropping into the ear a few drops of atropine solution, one grain to the ounce, with a dram of glycerin.

THINK ALONE!—When for good reasons it is impossible for me to think well of a brother physician, I shall do my thinking alone.—R. J. Reed, *West Virginia Medical Journal*.

PHARMACOTHERAPY has not kept pace with the immense strides of all other branches; so that it is with many physicians almost moribund.—L. F. Barker, quoted by *Sajous*.

SPEAK WELL OF BRETHREN.—When, for good reasons, it is impossible for me to speak well of a brother physician, I shall not speak at all.—R. J. Reed, *West Virginia Medical Journal*.

RUSTING OF INSTRUMENTS.—Leval prevents the rusting of surgical instruments by boiling them in

1-4 per-cent solution of sodium hydrate. It does not injure any instrument in the slightest degree.

ANESTHESIA DEATH.—Miss Laura Von Gerberger died at the West Side Hospital, while under the influence of ether, administered as an anesthetic for the purpose of an operation.—*Chicago Examiner*, May 5.

TEACHING OF PHYSIOLOGY.—Meltzer says: "Physiology tries to keep aloof from medicine; and manifests a longing for association with, or better still, for a reduction to, physics and chemistry."—*Sajous*.

CHLOROFORM.—The London (Ontario) *Free Press* reports that at Morrisburg, April 30, a lady collapsed while under the influence of chloroform, administered by a doctor, while a dentist was extracting teeth. The patient expired.

MASSAGE AND GONORRHEA.—Massage of a joint affected with gonococci leads to a greater absorption of toxins, and this may be shown by the effect on the opsonic curve, and in some cases by the clinical result.—Latham, *Canada Lancel*.

DRUGS HIS REMEDIES.—The physician knows through the teachings of practical experience that drugs are his legitimate and often trustworthy weapons of warfare, the strongest shield he has to interpose between his patient and the fell destroyer.—*Sajous*.

INFLUENZA.—W. Gifford Nash writes to *The Lancet* that he has discovered an unfailing diagnostic sign of influenza. This is a waxy, edematous swelling of the uvula, found at the commencement of the attack and lasting several days. It occurs before fever rises.

DEATHS FROM ANESTHESIA.—During 1906 in the city of London sixty-four deaths were officially reported as due to anesthetics administered for operations. In the remainder of England and Wales one hundred and nineteen more were reported.—*British Medical Journal*.

HIGH DEATH RATE!—A writer in *The Texas State Medical Journal* figures out a high percentage of deaths from scopolamine-morphine, by the highly original method of counting in eighteen deaths which occurred during operation under that

anesthetic, but which the operator declares were not at all due to the anesthetic, but anything is allowable to make out a case against a new anesthetic.

**MENSTRUAL SUPPRESSION.**—In suppression of menses due to cold, pulsatilla and gelsemium are excellent remedies. Cimicifuga is used in ovarian or uterine cases; manganese dioxide and iron in depraved conditions of the blood.—G. A. Landes, *Medical Era*.

**CANNABIS INDICA.**—The drug as prepared by Parke, Davis & Co. has proved efficacious in the author's hands for a number of years.—Hare's "Practical Therapeutics," Eleventh Edition, 1905. (Hare is also editor of Parke, Davis & Co.'s *Therapeutic Gazette*.)

**WANTED: AN OLD NUMBER OF THE CLINIC.**—If anyone has a spare copy of the February 1902 ALKALOIDAL CLINIC will he not please send it to this office? One of our subscribers, an old correspondent, is very anxious to secure this. Please let us know at once.

**UREMIA.**—Veratrine hypodermatically if swallowing is impossible, with heart stimulants if tension is low, should be pushed to effect. Veratrine opens up the excretory organs, increasing the elimination of urea and toxins through the skin, kidneys and bowels.—Smith, *Medical Era*.

**PHYSICIAN VS. PHYSIOLOGIST.**—Pawlow asserted that in many instances the physician gives a more correct verdict concerning physiological processes than the physiologist himself, and that clinical observations will consequently always remain a rich mine of physiological facts.—*Sajous*.

**ALTERATIVES AND TONICS.**—To interpret intelligently the physiological action of alteratives and tonics, an accurate knowledge of general metabolism, the foundation of nutrition, is necessary. What is known on this subject according to Michael Foster, "consists mostly of guesses and gaps."—*Sajous*.

**NIHILISM.**—Closely allied to the air, food and water apostles, are the therapeutic nihilists, who like Prof. Osler, believe in the doctrine of self-limited disease and look on while nature and the disease have it out. Jacobi emphasizes the truth of Dixon's doctrine that the tendency of all disease is toward death.—*Sajous*.

**QUACKERY.**—The normal results of this campaign against physicians, are that a multitude of innocent people are increasingly driven into the hands of quacks, that systems of practice based on this and misrepresentation are steadily gaining ground, and that patent-medicine vendors are accumulating untold wealth at the expense of the unwary.—*Sajous*.

**THE PIRATES.**—In *The Medical Gleaner*, John Uri Lloyd says the world is full of pirates, and some perfectly honest men have been made to rake the chestnuts out of the fire for the pirates; and that when these pirates can get the working formulas

that have been established by years of expensive experiments, they have accomplished a very important feature in the line of piracy. Hence one of the methods that have been adopted by them is that of attempting force, in such a way as to compel a discoverer or an evolver in self-defense to publish his working formula for the benefit of the pirates.

**BRYCE'S NEW SANATORIUM.**—Dr. C. A. Bryce, the noted editor of *The Southern Clinic*, author of Bryce's "Practice of Medicine", has opened a sanatorium for private diseases, in the suburbs of Richmond. We have no doubt that this opportunity will be appreciated by the citizens of the Virginian capital, and that Dr. Bryce's enterprise will be suitably rewarded.

**"TREATMENT."**—The subdivisions headed "Treatment" or "therapeutics," in our text-books, are mere catalogues of drugs which are stated to be "particularly useful," "most efficient," "very valuable," "commonly employed," "of great value," etc., in this or that disease, and in which not an inkling is afforded as to how the remedy antagonizes the morbid process.—*Sajous*.

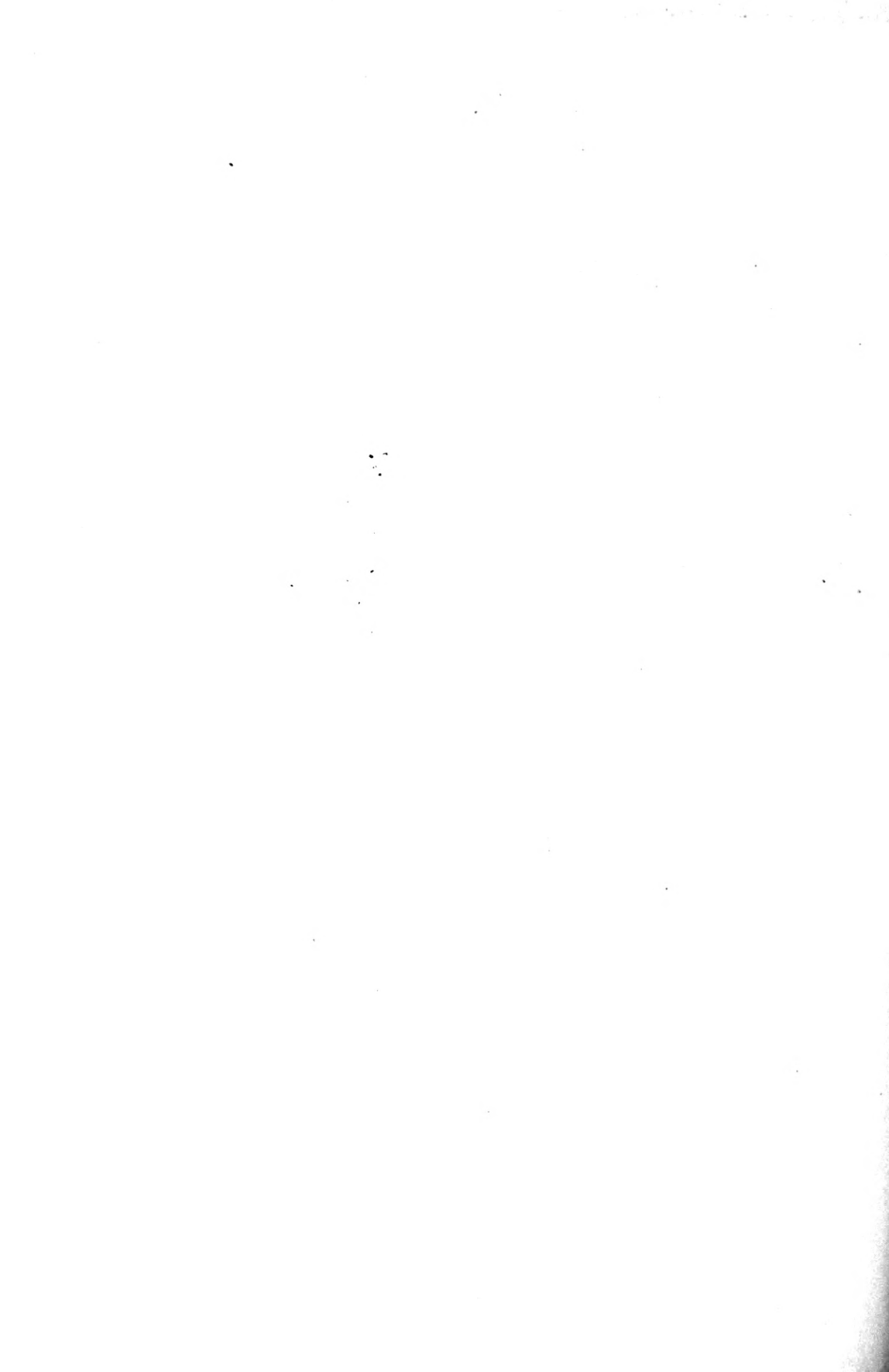
**HICCOUGH.**—In *The Medical Era*, Rankin describes a case of hiccough that had lasted more than seven days. It then ceased, and recurred one month later, finally yielding to hypodermics of hyoscine, morphine and cactin compound. From one injection the patient got three or four hours' rest. The affection occurred in a light form the next day, but on the following he was free, and it had not returned.

**UNFAIRNESS.**—*The Medical Era* calls editorial attention to the unfairness of the questions which are placed before the candidates for license by the State Examining Boards. Some questions cannot be answered because they are yet unsettled. The editor says: "We will venture to assert that every member of the average Board would fail were he confronted with an analogous set of questions constructed in a similar way."

**ANESTHESIA.**—Dr. Safley, of Livingston, Mont., informed the writer that he had administered more than two thousand of the H-M-C Comp. anesthetic tablets in his practice. According to Wood, he should have had to report at the same time at least ten deaths from that number, instead of which he had no deaths whatever to report. Multiplied evidences of this sort lead us to suspect that there is some grave mistake about Wood's statistics somewhere.

**IRRIGATION.**—A good deal of interest is being taken recently in the irrigation work in the northwest. Quite a number of these propositions are now before the public and a number of our physician acquaintances have invested in them. One in Western Wyoming, an irrigation plant put in by the State, sells the land including water privileges for \$30.50 per acre. A great Seattle company is developing an irrigation proposition on the Columbia River, thirty-five miles above Kennewick, the land here selling from \$175 to \$300 per acre. All these look good. But—investigate.







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